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Table of Contents, Page 63

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The Charlotte Medical Journal

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A Comparative Review of the Progress in Clinical Diagnosis During the Past Half Century.*

By Dr. R. M. Reid, Gastonia, N. C.

Were I to ask this representative body of medical men what *one* branch in the science of medicine has made the greatest progress during the half century just passed, perhaps nine-tenths of those present would unhesitatingly answer—Surgery; and the reason for this almost unanimous answer is obvious when we consider the admitted fact that an ocular demonstration of any scientific proposition is vastly more impressive than a tedious, profound and logical dissection of the same complex proposition. And yet, when we consider the wonderful achievements of some of our modern surgeons whose names are household words,—as Oschner, Murphy, Morris, the Mayos, Deaver, Blake, Halstead, Finney, and others equally eminent in general surgery, and Noble, Kelly, Hirst, Williams, Goff, Ross, Edebohls, Richardson, Brown, Miller, and others in gynæcological surgery, we must pause and consider past history, quickly and thoughtfully, lest we, like the nine-tenths above mentioned, be completely dumbfounded by the spectaculor feats and almost incredible results presented by such masterful surgeons. Far be it from me, either in suggestion or purpose, to cast the slightest shadow over the brilliant and progressive achievements of our honored surgeons of this twentieth century, yet, simple justice impells us to recognize and relate the accomplishments of other surgeons in other centuries past, whose names will live forever in the history of medical achievements and progress.

John Hunter successfully ligated the popliteal artery, and did a suprapubic cystotomy on himself in 1785. Post, of New York, ligated subclavion and innominate arteries in 1813. Valentine Mott ligated innominate artery, did hip joint amputation, and removed entire clavicle in 1827. Philip Physick, called the "Father of American Surgery," ligated 136 large blood vessels, —51 common carotids included,—excised one-half lower jaw, and did external urethrotomy in 1805. Ephriam McDowell did ovariotomy as early as 1809. Jno. Warren excised hyoid bone, and was the first surgeon to use ether narcosis the same year of its discovery by Morton in 1846. Gibson did two Cæsarean sections in 1812, the first since the century one before Christ, when the immortal Cæsar was from his mother's womb untimely ripped. Geo. McLelland excised clavicle, parotid gland, and removed entire scapula in 1823. Francis Maury performed first gastroenterostomy about 1850. Parker described and operated on appendiceal abscess in 1867. Marion Sims performed cholecystotomy and removed 26 gall stones in 1813.

From the above we are forced to admit that more than a half century ago these surgeons climbed the ladder of surgical fame to dizzy heights. But not until 1857, when Lister formulated and proved the theory of aseptic surgery, did, or could, surgery, reach the acme of seeming perfection it now occupies.

This paper is not intended as a treatise on surgery or surgical progress, except as a basis for comparison, for I am neither a surgeon nor the son of a surgeon, so I beg of you that you rest your eyes from the glare of the brilliant achievements and progress of modern surgery, and enter with me the silent room where a T. B. diphtheria, typhoid fever, pneumonia, malarial fever, syphilis, yellow fever or sleeping sickness is silently awaiting his last summons. Or accompany me to the darkened laboratory of clinical research work of such profound scholars and untiring students as Ehrlich, Wright, Klebb, Loeffler, Nogouchi, Wassermann, Councilman, Metchnikoff and Koch. Or if still in doubt as to the unparalleled progress of clinical diagnosis, accompany me to the laboratory of any well equipped hospital, and see the clinical diagnostician and laboratory student working silently and persistently with mechanical facilities of recent discovery, many of them undreamed of yesterday, but practical necessities today, by which they are enabled to test, see or prove the functioning power, whether histological or pathological, of every organ or tissue of the human anatomy, and thereby make a scientific diagram or diagnosis and probable prognosis, which diagram, when placed beside the subject on the operating table, steadies the surgeon's hands, sharpens his scalpel, quickens his perception and brushes aside indecision, delay and unsuspected conditions that were heretofore often fatal. In other words, a complete clinical diagnosis is to surgery or medicine, what the compass is to the mariner, what the

*Read before the Seventh District Medical Society meeting, Lincolnton, N. C., Dec. 2nd, 1913.

pilot is to the ship, and what the steering wheel is to the motorist.

Again I ask you to forget for a moment the wonderful achievements and progress in the skill, technique and life-saving results of the past half century, not only of surgery, but all the other branches of the science of medicine, and insist that you review seriously, without prejudice or partiality, the miraculous progress made in clinical diagnosis.—not considered as a separate branch, science. or entity, but as the indestructible foundation, to which the whole superstructure of the science of medicine is inseparably cemented.

If the above be true, that the strength of each of the other links in the chain of medical science depends upon its *central* link.—*clinical diagnosis*,—then it follows logically that the facilities,—educational, mechanical, biological, bacteriological, serological and pathological,—for making this diag: nosis must of necessity pave the way in scientific progress. In proof of this, consider if you will some of the mechanical facilities that have contributed so largely to the progress in clinical diagnosis, even during the qaarter century just passed. The microscope has uncovered many of the ever changing diagnostic theories of the past by magnifying a thousand diameters the normal and pathological, the visible and invisible, and the false and true. By its use the bacteriologist has demonstrated the morphology, involution, reproduction and vulnerability of many of man's most deadly and invisible enemies, pathogenic bacteria, and thereby made unexcelled progress in clinical diagnosis. By its use the biologist, through serology and serotherapy, has unmistakably shown the process of life and death to be a battle between infection and immunity, between toxins and antitoxins, and between phagocytosis and hemolysis. By its use through the hemocytometer we can number the warring forces of repair and suppuration, and watch their advance and retreat within the living body in their fight for supremacy, and thereby prognosticate the victor.

The sphygmomanometer enables us to see and know the ebb and flow of the life-giving fluid and thereby diagnose the power of resistance or onset of fatal exhaustion.

The stethoscope enables deaf ears to hear and interpret the softest sounds made by the body machinery that grinds out human existence.

The cystoscope, auroscope, aphtholmoscope and proctoscope enables us to see clearly the painting of health or disease on the inner walls of the deepest caves and darkest tunnels of the human body.

The Roentgen ray has made conspicuous and ofttimes pathetic some of the diagnostic errors of the past by photographing the innermost cavities and invisible structures of the human body, and shown their position and relation in health and disease. By its use hidden calculi, foreign bodies, ptosis of internal organs, and pulmonary shadows, cannot elude the penetrating gaze of the present day diagnostician.

If the above be true, compare the clinical diagnostician of today with those of 30, 40 or 50 years ago, and you will readily understand why we, by the use of the above diagnostic facilities, are able to *know*, where they could only suspect, are able to *see*. where they could only grope in the darkness of empiricism, and are able to arrive at an accurate and scientific diagnosis, where they could only strive to reach an uncertain and speculative conclusion.

In cousidering the almost miraculous progress made in clinical diagnosis and clinical medicine during the past half century from a comparative point of view, we must agree upon some accepted hypothesis. We suggest the hypothesis predicated on an undisputed law, both of political economy and democratic government, that any creation, science, discovery or policy whose progress has been such as to produce the greatest good to the greatest number of mankind, ranks first in progress and importance, and we will attempt to show, (to those who have not seen), and prove to those who are still agnostics, that clinical diagnosis has, and is today, fulfilling this law literally and technically. 'Tis a conservative statement to say that the creation by Behring of an antitoxin for diphtheria, made possible by the diagnostic discovery of Klebbs and Loeffler in 1884 of its causative bacilli, continues to save the lives of more infants and children annually than the combined efforts of fifty of the most eminent surgeons of today. 'Tis equally conservative to say that the diagnostic discovery of Koch in 1882 of the bacillus of T. B., its infectious nature and mode of transmission, saves more human lives annually than 100 of our most skilled surgeons. 'Tis a modest statement ta say that the diagnostic discovery of plasmodium malaria by Leveron in 1880, and the subsequent theory and proof by Manson, that its source of transmission to man is through an intermediate host, the mosquito. was more far reaching in its results than the teachings and writings of many of our most gifted surgeons.

Again, consider the diagnostic discovery of Widal in 1896 of the agglutination test of typhoid fever, made possible by Eberth's discovery of the causative bacilli in 1880, thereby making positive one of the most

complex diagnostic problems that daily confronts us.

Consider the incalculable benefit from the re-discovery of the American Hook Worm by Stiles in 1902,—a common scourge in the saud hills of our Southland.

Consider the diagnostic discovery by Weichselbaum in 1887 of the diplococcus introcellularies; the causative cocci of epidermis meningitis, and the subsequent discovery by Flexner of its antitoxic sera.

Consider the discovery by Wassermann (1907-1908) of the spirochete of luetic infections, and its results on unborn generations. Consider the incalculable results of the diagnostic research work of such men as Ehrlich, Nagouchi, Wright, Bordet and others, in seroology, hæmotology, leukocytosis, hemolysins, bacterines, vaccines, opsonic index, iodophilia, etc.

Again reverting to our accepted law of the greatest good to the greatest number, and we will agree that less than 10% of our citizenship require the services of a surgeon, while 100% require the services of a clinical diagnostician, in two epochs of their lives at least. First, when they are received into this progressive world; or, second, when they are ushered out of it, unless perchance they fall into the hands of a surgeon in the second count.

And now, in conclusion, I will present such concrete proofs of the process of clinical diagnosis that nine-tenths of those present will recognize the progress and verify my claims. Less than 40 years ago a simple diagnosis of T. B. pneumonia, kidney disease, heart disease, malarial fever, run down condition, old age and typhoid fever, was accepted generally as a satisfactory diagnosis. Not so today. A scientific diagnosis of pulmonary T. B. must present clinical evidence of its form, whether acute, miliary, or fibroid; its stage, whether incipient, progressive, or quiescent; its location, whether apex, of one or both lungs; its extent, whether only a part of one, or both lungs are involved; its demonstration by tuberculin reaction, microscopic findings of T. B. in sputum or blood, and by radiographic shadow of infected area, and its effect, on association, heredity, matrimony and nursing.

A diagnosis of pneumonia today must include a knowledge of its form, whether lobar, lobular, septic, primary, secondary, hypostatic, ether or tubercular; its stage, whether first, second, or third stage of gray hepitization; its extent, whether one or more lobes or lobules in one or both lungs; its blood pressure, whether high or low, whether blood pressure is consistent with pulse rate; its bacteriology, whether micrococcus, lanceolatus alone, or associated with Friedland's pneumococci, streptococci, staphylococci or bacilli of typhoid or diphtheria; its effect, whether defective aeration, as evidenced by cyanosis, or right heart dilitation, as evidenced by lessened or absent second sound; its blood count, whether consistently high or absent, as in malignant pneumonia; and its termination, whether by resolution, abscess or gangrene.

A diagnosis of typhoid fever, in any continued fever of obscure or unsought origin is not accepted today, but must include clinical evidence of a positive Widal and Diazzo reaction—leukopemia, rose spots—with other clinical symptoms, and the clinical evidence of the absence of bacillus of Eberth from excreta and dejecta of convalescents, or whether they are still typhoid carriers.

Much less than a half century ago the diagnosis of heart disease was accepted. Not so today. A diagnosis of heart disease must include the location of the lesion, whether valvular or muscular; its murmurs, whether organic or functional; if organic whether stenotic or regurgitant; the valve or valves involved, whether mitral, aortic, tricuspid or pulmonary; its effect on heart, whether hypertrophied or dilated, whether compensating or failing; its blood pressure, whether normal or pathological; its effect on other organs, whether the lungs, kidneys, arteries, stomach or liver are passively congested, as evidenced by dyspnœa, suppressed and albuminous urine, arteriosclerosis. nausea and vomiting, and enlarged liver.

And now, in conclusion, I ask you to consider the tremendous responsibility and hazardous heroism of the physician or surgeon of a half century ago in their attempt to advance a conscientious and scientific prognosis. Their efforts in those days, unaided by the very recent clinical facilities and training, can be likened to the mariner on a rudderless ship on an uncharted sea, tossed hither and thither by every wave of theoretical empiricism or phantom appearance of a harbor of safety. And just here let me state that a scientific prognosis is the omega, the finis, "the consummation devoutly to be wished" of all human efforts, in every phase of man's existence, which today in medicine is of such far-reaching importance to the physician or surgeon, and vastly more vitally important to the patient himself. The prognostic today in almost every case is nothing more nor less than the prophetic fulfilling, or end results, of a scientific clinical diagnosis, consistently expected and invariably received.

Surgical Anesthesia.*

By Dr. L. A. Crowell, Lincolnton, N. C.

The subject of my remarks has reference to anesthesia in major surgical operative procedures, for it is in this class of cases, especially, that the surgeon should have a person of experience to give the anesthetic, as the surgeon's whole time and attention should be given to the work in hand, and not occupied by dictating to an incompetent anesthetist. I know that no surgeon can do his best work and watch the anesthetist at the same time, neither can an anesthetist do his work well and keep up with the technique of the operation. The mortality from anesthetics has been greatly increased by "rubbering" and inattention on the part of the anesthetist.

In visiting the different clinics of our country and noticing the careless and indifferent way in which anesthetics are given, the great wonder to me is that the mortality is not very much higher than it is; and it also proves to me the harmlessness of an anesthetic if properly given.

The tendency of the times is to consider the anesthetic of minor importance, hence this important work is frequently intrusted to medical students and other incompetent persons. No one should give an anesthetic unless he is willing to give his entire attention to this work. A surgeon who can maintain his nervous equilibrium while performing a serious operation with a careless and inexperienced anesthetist reminds me very much of the old midwife sitting around a case of obstetrics with utter indifference while her patient is dying of some complication.

What anesthetic shall we use?

For a number of years I used chloroform alone; later I used chloroform and ether, two and one, and for the past five years I have used ether exclusively and consider it the simplest and safest anesthetic we have.

Miss McGaw, one of the anesthetists at the Mayo clinic, reports 14,380 ether anesthesias without a single death. I believe ether no more dangerous, when properly given, than a dose of castor oil, and so describe the risks to my patients. Every person should have a thorough physical examination before taking ether; ordinarily, any person in a condition for a serious operation can take ether. Weak and anæmic people, as a rule, bear ether better than the strong and vigorous. Alcoholics take ether badly and become especially boisterous during the stage of excitement.

Patients should walk into the operating room and get on the table unless their physical condition forbids, in which case they should be rolled or carried. All foreign bodies should be removed from the mouth and clothing loosened from neck and waist. The eyes should be protected from the ether by a covering of rubber tissue smeared with vaseline, over which a folded towel is placed. No talking or other noises should be allowed in the operating room, not even dictating to the patient how to breathe, but allowing him to breathe naturally. We use the drop method and the inhaler shown. Do not hurry the anesthetist, but, on the contrary, allow him to take all the time he wants, for it is my opinion that deaths are frequently caused by pushing the ether too rapidly. If the patient strangles and struggles raise the mask and allow him to take a few breaths of fresh air, at the same time cleansing his throat of mucous and saliva. Coughing at the beginning of ether anesthesia is due to the irritating effect of the ether on the terminal filaments of the pneumogastric and will disappear as soon as the patient can be gotten under; vomiting is due to the same cause and will likewise cease to give further trouble when the patient is completely narcotized. These complications are therefore indications for pushing the ether to complete narcosis as rapidly as is consistent with safety and to accomplish this object in the event of vomiting, it is usually better to remove the mask for a few minutes, allowing the patient to vomit freely, thereby relieving his throat and pharynx of accumulated mucous and saliva. Do not stick your finger into the patient's eye to ascertain if he is under; it tells nothing, is unscientific, and may set up a conjunctivitis. There are other and more scientific means of knowing when the patient is under. Should the patient swallow his tongue, raise the chin; if this fails to relieve, remove mask and pull tongue forward by introducing forefinger, covered with gauze, well back to the base of the tongue, using gag to protect finger. Never use tongue forceps, thereby obviating the necessity of explaining the results to patient later.

We do not use any form of hypodermic medication, except in stomach cases, when we give a preliminary dose of atropine to lessen the amount of pharyngeal and stomach secretions.

Hypodermic medication in ether anesthesia is very much like ergot in obstetrics. We always have them on hand, but rarely use them, for they, like ergot, act far too slow to save life. An unsatisfactory pulse or respiration is a call for plenty of air and not for hypodermic medication.

Giving an anesthetic is very much like learning how to swim; one cannot learn it from text books, nor can any one tell you.

*Read at Seventh District Medical Society at Lincolnton, N. C.

While it is necessary to be versed in the theoretical part of this very important work, there is nothing so important to the anesthetist as the hard school of practical experience.

There should be in every medical college a chair devoted exclusively to practical anesthetics where students should be required, during their last course of lectures, to give anesthetics under the supervision of the professor of this branch, thereby acquiring a thorough, practical knowledge of this subject.

In a majority of our medical colleges anesthetics are taken up with the course on materia medica and no more attention is given these important drugs than is given quinine and other simple and harmless remedies. Unless we can succeed in arousing the profession to the importance of having thoroughly trained and care-taking persons to take charge of this work we cannot hope to attain that degree of perfection when we can say to our patients, truthfully, that there is absolutely no danger from the anesthetic.

All hospitals should have a trained anesthetist whose duty it should be to look after the patient from an anesthetic standpoint from the time he enters the hospital until he has fully recovered from the effects of the anesthetic. The time is not far distant when nurses will be trained for this especial duty. It is in line with their work and there would be nothing to divert their attention. The nurse is now giving the anesthetic in some of the large hospitals, as well as in the smaller ones.

Much more could be said on this important subject, but the intention of this paper is to draw forth profitable discussion from this body, and if this be accomplished I shall be satisfied.

Intubation In Membranous Croup.*

By S. A. Wilkins, M. D., Dallas, N. C.

Intubation for a child with membranous croup is relatively of much more importance than antitoxin in pharyngeal diphtheria. The antitoxin is just as important in membranous croup as it is in diphtheria, as the investigations have shown that membranous croup is invariably caused by the Klebs-Loeffler bacillus. It being a diphtheritic infection and the antitoxin should be used promptly and in larger doses than in the ordinary cases of diphtheria.

The seat of this infection being in the larynx, the child dies from suffocation due to the closure of the larynx by the diphtheritic membrane.

The percentage of deaths from membranous croup without the tube is 80 to 90, and by the use of the tube this percentage can be reduced to 20 per cent. Comparatively, there are very few cases of membranous croup coming under the care of a physician. Perhaps he would not see on an average of more than one case in a year, but with a successful intubation he has four chances in five of saving the child's life to one in five if he doesn't use the tube.

This is a disease that calls for prompt treatment, and physicians practicing in isolated places, that is, the country and small towns, should purchase a set of these instruments and learn to do the operation, because we sometimes see these cases in the night and the child is so bad that something has to be done that night to save its life and we haven't time to get a specialist from the larger towns.

My course in treating these cases is to give a large dose of antitoxin just as soon as I am reasonably sure that the child has membranous croup. I repeat the dose every 8 to 12 hours until I notice some improvement. I usually give a small dose of calomel and a large dose of castor oil and other medicines if I see symptoms that indicate their use, but there are no medicines that you can use that will give any more than a temporary relief. I leave off introducing the tube until the dyspnea is marked and gradually getting worse and the symptoms show that the child will have to have the tube in place for relief. After I get the tube in place I give whiskey as a stimulant, and I think it has been worth more than all other medicines in treating my cases. I sometimes give whiskey and peptonoids by the rectum when it is necessary, but the child can usually take enough of a liquid diet by the mouth, after the first twenty-four hours, to sustain it. Usually after introducing the tube the child is very thirsty and for the first twenty-four hours it is very difficult for it to drink water. To relieve this thirst I use an enema of a half pint of normal saline solution every hour until the thirst is relieved, and it will certainly relieve the thirst as well as if the child had drank the water. In giving the child water or anything else to drink I give it in a tumbler and let the child take large swallows, as it doesn't seem that any more water gets into the tube with a large swallow as does with a small spoonful, nor does any more water get into the tube with three or four large swallows than it does with one. So I let the child drink from the tumbler until the coughing stops it. I think it is necessary to give the child some water or well diluted

*Read before the Seventh District Medical Society of North Carolina recently held at Lincolnton, N. C.

whiskey by the mouth occasionally that it may cough some and keep the mucous from collecting in the tube and getting dry

I am omitting any directions for introducing the tube, as these can be obtained from any of the text books on diseases of children. Holt gives very plain directions, but says it should not be attempted unless the physician has had previous practice on the cadaver, and in this I agree with him. I think it is useless for a man to try the operation if he has never practiced on the cadaver. After you once perform the operation it is not hard, though it requires skill. I have never been able to do the operation without the second attempt, and I have had to try as often as six or seven times before I got the tube in properly. If the tube is in the larynx properly it certainly will relieve the dyspnea after the child coughs several times, unless the membrane is so far down that the tube will not reach beyond it. I have never had a case where the tube did not give good relief, and I feel certain that I have saved the lives of five children within the past six years. I have had one case to die and I will give a partial history of two of my worst cases.

The fatal case that I had was in December, 1909. A boy three years old. I saw the child just before daylight on December 9th. I gave 5000 units of antitoxin and had to put in the tube about 3 o'clock in the afternoon. This gave the child apparent relief and I did not use more antitoxin until the following morning, and the next day I used antitoxin again. After the third dose I stopped using the antitoxin as the child seemed to be getting along nicely. The child did not improve like it should have done. On the ninth day I took the tube out, but had to replace it immediately. On the thirteenth day the child coughed the tube out and died in less than two minutes. If I have another case similar to this I will use a larger tube after the first week. It is unusual for a child to have to wear a tube longer than from three to five days, if you can get a good effect from the antitoxin.

Another case I saw in this same family February 14th, 1912. A boy two years old. I first saw the child about 3 o'clock in the afternoon, and it was evident that the child would have to have the tube in its larynx right away. The child had eaten a hearty breakfast and some dinner and this food was still in its stomach. When I would try to introduce the tube the child would begin vomiting, and I had to make six or seven attempts before I could get the tube in properly. This gave the child the relief desired and I then gave the antitoxin and repeated the dose next morning. This is all the antitoxin I used. On the third day I returned to see the child. It had developed a case of lobar pneumonia which lasted for eight days, its temperature staying around 104 degrees F., and its respiration 80. After the crisis in the pneumonia the child gradually got well, wearing the tube 19 days. The reason I let this child wear the tube as long as I did without changing it, was because it gave the child such good relief in its breathing. The child got so it could drink liquids without much trouble and when I introduced this tube it fit tighter than the one in the other child in this family that died.

The other cases I had got well without any trouble, wearing the tube from three to five days.

I lost three cases of membranous croup during my first five years practice, without being able to do anything for the child that would give it relief. And this made me determined to obtain a set of the instruments and do the operation, and I have never done anything in my work that gave me as much satisfaction as saving a child's life of this dreaded disease.

One of the objects of my reading this paper is to insist and encourage the doctors with an isolated practice, that is, in the country and small towns, where they can't get a specialist in a few hours, to purchase a set of instruments and learn to do the operation. In this work you cannot depend on a specialist, for so often it is impossible to get one in time. And if you will learn to do this operation and save one child's life in a family that is near and dear to you in your practice you will feel that you have done something worth while.

The Medical Man of Yesterday, Today and Tomorrow.*

By Bittle C. Keister, A.M., M.D., Roanoke, Va.

All honor to our predecessors of yesterday, among whom we are pleased to discuss Dr. Oliver Wendell Holmes, Dr. Joseph Lister and Dr. Edward Jenner, as typical representatives of the Medical Man of yesterday; after which we will discuss briefly the predominating characteristics of the Medical Man of today, then give a few pointers foreshadowing the Medical Man of tomorrow, basing our conclusions on the conditions that prevail todoy.

Dr. Holmes was born about 104 years ago (August 29, 1809). He graduated at Harvard College, and later studied medicine in Europe, mainly in Paris. On his return to

*Read before the Medical Society of Virginia October 25, 1913.

America he located in Boston, where he began the practice of medicine. At the expiration of two years he was appointed Professor of Anatomy at Dartmouth College, a position which he held for two years, when he resumed his Boston practice. It was about this time, 1843, that he published his famous essay on the Contagiousness of Puerperal Fever, which was as a bomb-shell thrown in the camp of the medical profession of that day. From 1847 to 1882 he was Professor of Anatomy and Physiology in Harvard Medical College. In spite of his scientific attainments his reputation as a scentist was over-shadowed by that of a *genius* and a *man of letters*. At the age of 21 he wrote the "Old Ironsides," which brought him into public notice, and later through his poetry and fiction, and the sparkling talk of the "Breakfast Table" series, he took a high place among the most distinguished group of writers that America has yet produced.

He was a careful thinker and fluent speaker, and was in great demand as a lecturer at College commencements, and never failed to have something good and cheerful in store for the young college student. He was of a jovial and happy turn of mind, and with this accomplishment he was, in a measure, fortified against the common ills and petty worries of a strenuous life that characterize the lives of so many of our medical men of today. It has been wisely said that cheerfulness and contentment play a great part toward a medical man's success as well as toward his reaching his three score and ten years. Dr. Holmes lived to the ripe age of four score and four years, a clear gain of fourteen years over the allotted time for man to live. He was a close student and kept in close touch with all of the best interests of the profession until his death in 1894. Dr. Holmes was an all-round educated man, hence free from narrowness and one sidedness of both mind and heart. These principles he imbibed in early life and maintained them, even to his last days on earth. It is a rare occurrence, even with all of our sanitary improvements and much boasted civilization, for a medical man of today to retain his mental and physical vigor for so long a period as 84 years.

In looking over the death list of the Journal of the American Medical Association we find the sad fact that very few of the medical men of today reach the age of three score and five years. This may be accounted for, in part, by the strenuous life with its dire effects upon our blood vessels, causing us to age prematurely. Then there seems to be a tendency on the part of the profession to indulge too freely in the use of narcotics. These stern, cold facts are not confined to the medical profession alone but they are applicable to all of the other learned professions. I am making these statements with some feeling of trepidation, yet they are facts that cannot be refuted. It is now a much mooted question and ably discussed by some of our most eminent thinkers as to whether our profession and our country would be better off without the commoner narcotics. especially that class that belong to the habit-forming drugs. We have very scant accounts of the use of this class of drugs by our predecessors of yesterday, and it does seem that if they, with all their embarrassments and handicaps could do without them, we of the twentieth century enlightenment, knowing that the habitual use of these tend to shorten our prospective longevity, could well afford to eliminate them from our pharmacopœa.

It was through the instrumentality of Dr. Holmes that thousands of mothers were rescued from that fell disease puerperal septicemia. The death rate at that day from this disease ran as high as 60% in some of the hospitals and tenement quarters of the larger cities. The contagiousness and mortality were considered on a par with measles and smallpox. Dr. Holmes, in his famous essay, cites a number of very striking instances where as many as sixteen consecutive cases of the disease occurred in one doctor's practice and all of these women died within the space of two weeks, Dr. Holmes himself having been called in consultation in a number of the cases. The attending physician, Dr. Kellie, afterwards left the community for several years. Dr. Coapland, a neighboring practitioner, attended six consecutive confinements within the short space of eight days, all of whom took the disease and died inside of twelve days.

It was not long after these scenes until the eyes of the profession and the public began to take notice of Dr. Holmes and his timely warnings of the contagiousness of the disease, and the importance of cleanliness and sanitation of the lying-in chamber. Their main disinfectant was chlorine and lime. After these precautionary measures were instituted through the persistent pleadings of Dr. Holmes, the mortality from puerperal septicemia was reduced to almost a minimum.

It required much tact and diplomacy on the part of Dr. Holmes, as well as the most logical argument, to convince his professional brethren that they, themselves, were carrying the disease about in their clothing and under their finger nails, infecting their patients, and in conjunction with the nurses and midwives, were the direct cause of the

high percentage of mortality among their lying-in patients.

Dr. Holmes met with much opposition on the part of distinguished medical men of both this country and abroad, many of whom made light of his theory on the contagiousness of puerperal fever; and not until after the sacrifice of the lives of many thousands of mothers and innocent babes, and deliberate investigations and repeated trials of his theory of preventive measures, did their antagonism begin to melt away and vanish. Consider if you please, at what great sacrifice of humanity the role of ignorance and sheer indiffereace had played; and under such an array of bitter opposition with which Dr. Holmes had to contend in order to establish the truth and sanity of his claim against this terrible pestilence. To illustrate Dr. Holmes' magnanimity of heart towards his critics, who had denounced his theory on contagion, both in public print and before public assemblies, permit me to quote his own words from his famous essay: "I have no wish to express any harsh feelings towards those who differ from my views on this painful subject. It is a lesson rather than a reproach that I recall the memory of those irreparable errors and wrongs. No tongue can tell the heart-breaking calamity they have caused; they have closed eyes just opened upon a new world of love and happiness; they have cast the helplessness of infancy into the stranger's arms, or bequeathed it with less cruelty, the death of its dying mother. There is no tone deep enough for regret, and no voice loud enough for warning. The woman about to become a mother, or with her newborn infant upon her bosom, should be the subject of trembling care and sympathy wherever she bears her tender burden or stretches her aching limbs. The very outcast upon the streets has pity and mercy on her sister in degradation when the seal of promised maternity is pressed upon her. The remorseless vengeance of the law is arrested at a word which reveals her trancient claim for mercy. The solemn prayer of the liturgy singles out her sorrows from the multiplied trials of life to plead for her in the hour of peril. God forbid that any member of the medical profession to whom she entrusts her life, doubly precious at that eventful period, should hazard it negligently, unadvisedly, or selfishly!"

Here we have a man typical of the real Medical Man of Yesterday, whose life and example are worthy the imitation of the Medical Man of Today.

Dr. Holmes deserves as much honor for the salvation of the mothers and babes of his day as Napolean or Washington does for the part they played in the defense of their country. It would be but a fitting tribute to his memory for the women of our country to erect a handsome monument in the city of Washington commemorating his famous essay on Puerperal Septicemia with his many other deeds of chivalry along the line of preventive medicine and aesthetic literature.

What I have written of Dr. Oliver Wendell Holmes and his noble deeds for humanity, as a Medical Man of Yesterday, might also be emphasized in behalf of Drs. Joseph Lister and Edward Jenner, both of whom were typical specimens of yesterday.

Dr. Lister, through his discovery of, and his writings on the subject of Antiseptic Surgery, deserves a Memorial tablet in every surgical hospital of the entire world. It was the privilege of the writer to listen to a very interesting paper read by this hero of medicine at the first Congress on Professional Medicine held in the city of Paris in the year 1900. Dr. Lister had then reached the age of three score and thirteen (73), but his mental faculties and clear enunciation were perfect, as were also his erect figure and firm military step, all of which were pleasantly commented upon by his admirers in the audience. It was about this time that Dr. Lister received the royal title of "Lord," and from that period till his recent death he was known and addressed as Lord Lister. He received his general education at the University of London. He studied medicine and surgery in both London and Edinburgh. After his graduation he lectured on surgery at the University of London, at Edinburgh and at King's College Hospital, and was later made Professor of Surgery at Glasgow. Thus we see, Dr. Lister was afforded ample opportunity to study and develop his great theory on Antiseptic Surgery. His first experiment with his new theory was tried on a case of compound fracture of the leg, which was admitted to the hospital eight and one half hours after the accident. His treatment consisted of an application of pure carbolic acid to the exposed parts by means of suitable cloths, followed by proper bandages, etc. Later he improved this by using lint saturated with carbolic acid, over-lapping the sound skin to a certain point, and afterwards covering the entire wound with a tin cap made from block tin, which was daily raised from the wound in order to touch the surface of the lint with the antiseptic. This treatment proved quite successful in all cases of small wounds, but on account of the excessive sloughing it did not prove satisfactory in large wounds; hence he devised a paste consisting of carbonate of lime, mixed with a solution of one part of carbolic acid in four parts of linseed oil so

as to form a firm putty. This paste was applied to the wound daily as long as any discharge continued. A soft cloth dipped into the carbolized solution was placed over the entire surface of the wound prior to applying the paste. In many of the cases treated by this method the wounds healed by primary union, without the slightest indication of pus, which was a revelation and a thing unheard of up to that time.

Dr. Lister, like his predecessor, Dr. Holmes, was a model man and physician; they both lived a quarter of a century ahead of their generation. The science of bacteriology was still unknown when these two great pioneers of the medical profession were doing their greatest work for humanity.

Dr. Edward Jenner, born a century and a half ago (1749), was also one of the pioneers of the medical profession, and we may consider him in the same class with Drs. Holmes and Lister, and a worthy type of the medical man of yesterday. His long and happy association with that great surgeon, Dr. John Hunter, of London, prepared him in a great measure to face an exacting public and surmount the perplexities that were in store for him. Dr. Jenner was a local surgeon of some repute, and at one time did a large general practice, but his attention became so much absorbed in the subject of vaccination for smallpox that he could not do justice to his practice. Early in his career he began to observe the phenomena of cowpox, a disease common in the rural parts of the western counties of England. He was familiar with the belief, current among the peasantry, that a person who had suffered from an attack of cowpox could not take smallpox. Finally, in 1796 he made his first experiment with vaccination, inoculating a boy of eight years with cowpox, and after his recovery inoculated him with smallpox, with the result that the boy did not take the latter disease.

Dr. Jenner wrote a number of papers on the subject of his success in the prevention of smallpox by vaccination, but at first both the profession and the laity discountenanced his efforts and denounced him as an imposter and fake. Jenner, however, was not made of the kind of material that gives up in despair, as many others would have done. He kept up his investigations and reported his results from time to time, until he gained recognition by both the medical profession and the House of Parliament.

In the year 1807 Barvaria made vaccination against smallpox compulsory; and since that year most all of the European governments have officially compelled the practice, and now smallpox has ceased to be the almost universal scourge of the world it was before Dr. Jenner's discovery.

Here we have a man who gave his whole professional life toward the accomplishment of one end, that of saving his fellowman from the scourge of one of the most loathsome diseases ever known to mankind.

Dr. Jenner withstood the criticisms and derision of his opponents well. His theories were criticised not only by the laity, the country doctors from the rural sections, but with even greater vehemency and distrust by some of the leading medical lights of London. He was debarred from presenting his claims before the Royal Society, the president of which warned him against risking his reputation by presenting his views on anything that appeared so much at variance with the established knowledge of so learned a body as the Royal Society of London.

Like Harvey, Morton, etc., his practice and fortune were on the wane, and for two years he became almost desperate, knowing so well that he was pursuing a just and righteous cause, notwithstanding the fact of his being handicapped on all sides. Twenty-five years had been spent in investigation and carefully kept records before Jenner ventured to make his conclusions public. To his sensitive disposition the opposition which he now met after his long and patient wait, caused him bitter disappointment.

Dr. Jenner's feelings during all this time are well described in his own words. He says: "While the vaccine discovery was progressing, the joy I felt at the prospect before me of being the instrument destined to take away from the world one of its greatest calamities, blended with the fond hope of enjoying independence and domestic peace, was so excessive that in pursuing my favorite subject among the meadows, I sometimes would find myself in a kind of reverie. It is pleasant for me to recollect that these reflections always ended in devout acknowledgements to that Being from whom this and all other mercies flow."

By what better standard could we measure this man's magnanimity of heart than these humble expressions, uttered in such a trying period of his life? No doubt but every medical man of any note has had experiences in his life somewhat akin to these, and it is at just such a time that we can see the inner man and read his real life. Ephraim McDowell, Marion Sims, Joseph Price and Hunter McGuire had experiences somewhat akin to these.

We now have before us the short stories of three of the greatest heroes of the medical profession of yesterday, born on an average of only a quarter of a century apart, yet their hearts and intellects blended together for the same great end, that of saving hu-

manity from deadly infection, regardless of the criticisms of their fellowmen, regardless of self pride, regardless of the comforts of this world's goods.

What a sweet heritage we of the medical men of today have in these noble, self-sacrificing path-finders in medicine of yesterday! What an inspiration it is for us to put forth greater efforts in our research work for remedies to harness up tuberculosis, pneumonia and cancer!

Have we not men in our ranks today who are equal to this great task? Have we not a Holmes at Johns Hopkins who will, in the not distant future, give us a true remedy for the Nation's greatest scourge, tuberculosis? Or a Lister to destroy that arch enemy, cancer? Or a Jenner to inoculate against pneumonia, the night-mare of the medical profession of today? We need just such a *trio* of energetic, self-sacrificing workers as above mentioned.

Why should we allow pneumonia to destroy one in every five, tuberculosis one in every seven, and cancer one in every eighteen of the deaths that occur in our human family? Echo answers why! When we consider the superior advantages and the improved facilities that our scientists and medical men of today have over those of yesterday, this question becomes quite pertinent, and should be answered. I would not venture or presume to give anything like a definite answer to this important question, but in my humble opinion, one of the causes of the apparent laxity on the part of our scientific men of the medical profession of today, lies in the fact of the commercial spirit of the age predominating over the spirit of self-sacrifice and disinterested honesty and devotion to science and humanity.

We have too many Friedman's in the world, who belong to the superficial class of pseudo-scientists, and are looking for remuneration or graft long ere the surface of the mine is stirred for the precious truths of refined gold that lie far beneath the soil, awaiting the gentle touch of the magic wand of science. Then, too, we have such a multiplicity of medical colleges, sending out each year in the United States over 6000 graduates, filling the already crowded ranks of the profession so full that competition becomes so keen that the spirit of commercialism is engendered to such an extent that all other interests are relegated to the last, giving away to the inexorable "First law of nature, *self preservation.*" The thirst for notoriety and worldly goods on the part of the medical men of today, is so great that it overshadows the thirst for scientific research and disinterested love for humanity.

All honor to our distinguished Osler, Wyeth and S. Weir Mitchel, three of our American lights and typical of the medical man of today. We might cite many others of equal distinction, representative of our medical men of today, but for our purpose these will suffice. Now for the sake of argument and to confirm the attitude I have ventured to assume, draw a line of contrast between these three great men of today and the three great pioneers of yesterday, and consider the difference in results obtained for humanity; and if there is a very great difference let us without prejudice and with due consideration, define the real cause of this difference.

The fate of the medical man of tomorrow may be anticipated and fore-shadowed by the conditions that prevail in the profession today. The science of preventive medicine is taking deep root in every civilized country on the globe. This little vine was planted by the medical men of yesterday, and it has been carefully guarded and nourished by our sanitary boards and medical men of today, until it has assumed great proportions. The medical man of today is now carrying on a propaganda to obliterate the necessity of his future existence. His dependence for a living is wrought through his services in treating the diseases which he is striving to make extinct. As a business he is putting aside business principles, but as a profession it is the most beneficent of all others in trying to improve the condition of mankind and alleviate human suffering. We are teaching the mothers how to save their babes from sickness and all the while taking the bread from the mouths of our own children.

We are just at the beginning of the time when the practice of preventive medicine will be pursued with as much activity and zeal as our forefathers did in trying to cure disease by the healing process. During the evolutionary progress of medicine there will always be an important mission for the doctor, but he will have less and less to do with the sick, but more and more with the prevention of sickness. The man who is most skilled in the exercise of the preventive function is to be the important man of the future. Our most modern pharmaceutical agencies for the treatment of diseases will be supplanted by serum and vaccine therapy, saying nothing of Schaeffer's "phylacogens," salvarsan, etc., that are now undergoing the experimental stage. In my humble judgment, ere the closing of the twentieth century, this line of therapeutics, with the assistance of the science of sanitation and eugenics, there will be a very limited sphere for the pharmacist and the medical man of tomorrow.

These are the surmisings of one who has had favorable opportunities to observe and

study the *signs of the times*, and judging from the direction the hand on the "*dial of time*" is pointing, it is but right and timely that a friendly warning should be proffered to the medical man, our brother, of tomorrow, lest he be *laid on the shelf*, or crowded out of business with but little to do for suffering humanity or for self-preservation.

In consideration of the fact that about three-fourths of the diseases of today will, in the near future, be controlled by health boards, assisted by eugenics and the inoculation of serums and vaccines, it is but natural and logical to conclude there will be no need of more than one-half of the present number of medical men in the United States, and it would naturally follow that about one-half of the present number of medical colleges would suffice for all purposes.

All honor to the medical man of Yesterday! Today! and Tomorrow!

"Lives of great men remind us
We, too, can make our lives sublime,
And, departing, leave behind us
Foot-prints on the sands of time;
Foot-prints that perhaps another
Sailing o'er life's solemn main,
A forlorn and ship-wrecked brother,
Seeing, shall take heart again."

"But if the pilot slumber at the helm,
The very wind that wafts us toward the port
May dash us on the shelves. The steersman's part
Is vigilance, blow it rough or smooth."

THE DOCTOR'S REWARD.

"Praise! When the ear has grown too dull to hear;
Gold! When the senses it should please are dead;
Wreathes! When the hair they cover has turned gray;
Fame! When the heart it should have thrilled is numb."

The Necessity of More Careful Diagnosis in Surgical Cases.*

By Robert L. Gibbon, M.D., Charlotte, N. C.

The title of this paper is one of those general statements, the truth of which no one denies verbally, but which are too often set at naught in our practical, every day work. Furthermore, this particular fact has been written and talked to the limit, and if I must offer an apology for inflicting a brief reiteration upon you at this time, it is the selfish one that I myself need to be reminded of the very admonitions which are here set down, and if in the reading any one else, than myself, shall receive benefit therefrom, I shall be alike surprised and pleased.

What I shall say is largely from the surgical standpoint, not that the surgical part of the profession are sinners above other men in this matter, but because I am more familiar with their side of the case

At the same time I am aware how little value we receive from a rehash of the general observations and rules of practice, that have been so often laid down, hence I shall avoid with equal care the impossible task of telling you something that you didn't know before, and of exhausting your attention by a recapitulation of what you already know so well. There is left as an excuse for such a subject and for such a paper the hope that it may serve as a gentle reminder to use the knowledge we have, even at the expense of a little more trouble, in our daily work, when we are so often tempted to slur, to jump at conclusions before we have thoroughly informed ourselves of the facts, and in general to exercise, at least to the physiological limit, a certain part of the central nervous system not usually overworked in any of us.

The present day graduate of our medical schools has been carefully trained in the ordinary laboratory methods of diagnosis, so that in almost every locality there is a man, who with a little encouragement, financial and otherwise, will check over our cases and help us to avoid many of the absurd, if not dangerous, errors of diagnosis. This is almost mandatory upon the surgeon, whose view of a given case is often of supreme importance to his patient. Such a simple matter as a white blood count may prevent his removing an unoffending appendix in a beginning typhoid, to use an instance not so infrequent as you might imagine. We have reached a stage where every physician should provide himself with such clinical laboratory connections as will enable him to avoid many of these mistakes, mistakes, to our shame be it said, only too common, instances of which will occur to every man here. The public are being educated into demanding this sort of an investigation of their ailments, and they should be taught to pay for this kind of information, for it is a fact that the men doing this work in private practice are so poorly recompensed, that, whether they do it in their own cases, or in the cases of others, they often give it up after a time in disgust. Yet to get the best results it is necessary that these examinations should be a matter of routine.

How much a man's temperament has to do with his success, is a question of which we can only speculate, although it cannot be doubted that careful training does a great deal to counteract certain tendencies. Some of our best men have the fault of hasty decision, or of wide and sweeping

*Read before the Seventh District Medical Society of North Carolina which recently met in Lincolnton, N. C.

generalization upon very insufficient grounds; from others it is difficult to extract any opinion at all; some are tremendously influenced by their prejudices, the rearranging of which they call the exercise of judgment, while a last class are too indolent, either physically or mentally, to investigate their cases properly. It is more than probable that all of us, with certain exceptions I will not now take the responsibility of naming, have, at one time or another, been guilty of each and every one of the defects above mentioned, so that this is hardly an appropriate time and place for casting any stones.

Personally, the errors that stand out most distinctly in my own mind have to do with a too hasty decision. I have always seemed to exercise better judgment after seeing a case at least twice, before reaching an urgent and important decision. No doubt that is the case with most of us. I narrowly escaped operating upon a case of beginning pneumonia for appendicitis, not three weeks ago. A delay or 12 hours saved me. At the end of that time the pneumonia was evident to the most casual examination, the patient dying a few days later. Even when the abdomen has been opened, operators have sometimes failed to find the cause of the trouble because they have not made a systematic search. Sometime since I had occasion to look up the literature on obstruction of the bowel due to plugging with gall-stone, and quite a number of cases are on record where the surgeon overlooked the real cause of the obstruction, and closed the wound without relieving the trouble, the obstruction being supposed to be due to some other and minor cause.

When we consider the question of cancer from a diagnostic standpoint, the sins of omission run into big numbers. In the present state of our knowledge every case of cancer in the initial stage is susceptible of cure, provided that its location permits of complete removal. What advance we have made is almost entirely in an earlier recognition of the nature of the disease. Seen and recognized in the early stage the average operator, with only a local reputation, will get far better results as to cure than a Finney or a Halsted can achieve by the most radical and elaborate work at a later stage. Yet how seldom do the surgeons get these cases at the favorable period? The uterine subjects of cancer show up with involvement of the vagina and the neighboring tissues, so as to preclude the idea of doing more than prolonging life, and rendering the inevitable end less loathsome.

Far less excuse is there for the man who will wait until the axillary glands become involved, the nipple retracted, and the malignate mass on the point of ulceration before he will advise surgical interference in breast cases. Statistics have told us over and over again that 80% of all breast tumors are malignant, or will become so, then why give the cancer instead of the woman the advantage of the percentage? Is the removal of a small growth from the breast, even if a pathological examination should prove it to be harmless, such a serious matter that we are willing to let the day of grace pass, while we leisurely make up our minds what to do? I am aware, of course, that many of these cases are purposely concealed by the unfortunate victim, even from members of her own family, but this can be largely overcome by proper instruction at the hands of the general practitioner, and the cases are not so rare where the physician himself is responsible for the fatal delay.

In all tumors, as in a great many other medical problems, even at the risk of being considered an alarmist, it is better to start out with the mental assumption that we have a serious condition to deal with, and then by careful investigation attempt to arrive at a correct solution of the case. Failure to apprehend the gravity of the situation is big with the possibility of future disaster, while an error in the opposite direction is susceptible of easy correction.

A discussion of this sort would be incomplete without reference to an apparent paradox in the matter of diagnosis. There are certain acute, fulminating conditions, most frequently seen in the abdomen, in which a prompt, urgent and decisive action is demanded, if the patient's life is to be saved. The causative nature of these conditions is occasionally very obscure; to delay interference until an exhaustive investigation has been made, or until we have arrived at a definite opinion, is to refer the whole question to the final arbitriment of an autopsy. Such cases are seen in perforations of stomach or duodenum, pancreatic disease of an acute character, and some rare cases of appendicitis. What is needed here, is to recognize the imperative necessity for surgical relief, not the need of a pathologically correct diagnosis.

Diagnosis of Duodenal Ulcer.*

By Henry Norris, M.D., and M. H. Biggs, M.D., Rutherfordton, N. C.

Duodenal ulcer is four or five times as common in men as in women and is a disease of early maturity; it is not uncommon

*Read before the Seventh District Medical Society of North Carolina which was recently held at Lincolnton, N. C.

when taking an ulcer history for the patient, if he be fifty or over, to say that he has had symptoms as long as he can remember. In the very beginning there is merely a feeling of discomfort and heaviness in the epigastrium which is only noticed occasionally at first, but which soon recurs with great regularity a few hours after the ingestion of food; from two to six hours, the average being about two hours. It is more marked after the chief meal of the day and if liquid food only is taken, the distress comes sooner and lasts longer though it is less severe. There may be slight loss of weight, but the patient is apt to look well and feel well except during the periods of gastric distress, and the appetite is unfailingly good, hence they usually get little sympathy in the early stages. It is very characteristic of ulcer to have an entire subsidence of all symptoms for periods varying from a few weeks to several months, and during this time patients eat as they please and appear normal in every way. As one of our patients very graphically expressed himself "My symptoms come and go like a flock of migratory birds." Belching and sour eructations are commonly complained of, but vomiting is not an unusual symptom. The pain of duodenal ulcer is variously described as an uncomfortable feeling or as a boring, burning, gnawing or lancinating pain. It is felt in the midline about two inches above the umbilicus and is confined to a quite small area; it usually does not radiate laterally but may go through to the back. On physical examination little can be determined from an examination of the abdomen. Unless the case is of very long standing the general appearance of the patient will be one of health; the skin will look healthy and the mucosæ will not appear anemic. We have found in several cases, on examining the mouth, that the teeth showed evidences of acidity. There are then a characteristic group of symptoms, which if carefully elicited from the patient will usually enable one to make a positive diagnosis of duodenal ulcer without physical examination, gastric analysis or the aid of the X-Ray. To obtain this history from the average patient it is necessary for one to possess a good deal of patience and to listen to much that is irrelevant, and above all one must avoid suggesting symptoms. In a case in which we suspect ulcer, after making a general examination we let the patient tell his own story in his own words, and then we begin with:

"How long ago did you first think that you had anything wrong with you?"

"When do you feel most comfortable, when your stomach is full or empty?"

"How many times a day do you eat?" (If he says that he eats between his meals we ask him why he does this).

"Have you ever gotten entirely well and then had all your symptoms return without, so far as you know, any indiscretions of diet or change in your ordinary habits?"

"Do you have eructations and if so what is the taste?"

"Do you ever wake up at night with pain and if so what do you do?"

"Have you ever vomited blood?"

"Have you ever noticed that your bowel movements were black?"

In the differential diagnosis the very chronicity, periodicity and remission of the ulcer symptoms are characteristic, the pain occurs several hours after eating and disappears when more food is ingested, the appetite is good though the patient may be afraid to eat anything but the simplest food; during the time when the ulcer partly heals over all the symptoms subside. The findings in gastric analyses are not diagnostic, but coupled with the history are sometimes of corroborative value. Screen examinations with the X-Ray are useful in pyloric obstruction and in hour-glass stomach. Probably 80 per cent. of ulcer cases have hemorrhage, but in the majority of cases the blood is occult. The nearer the pylorus the ulcer is situated the shorter is the interval of relief afforded by the taking of food and in those cases in which pyloric stenosis has developed as a result of cicatricial contraction, the clinical picture closely resembles that of gastric carcinoma; there is continuous distress which is made worse by food and is temporarily relieved by vomiting or gastric lavage; there is rapid loss of body weight and strength and pronounced anæmia. The eructations and vomitus are exceedingly acid. When the ulcer involves the posterior wall of the duodenum the common duct may be obstructed by scar tissue, giving rise to symptoms of malignancy in the gallbladder or liver. In these atypical cases the early history is of the greatest value in enabling one to arrive at a correct diagnosis. The conditions which may most closely simulate duodenal ulcer and gastric ulcer are appendicitis (and in a great many ulcer cases the appendix is found to be chronically diseased) infections of the biliary tracts, and cardio-renal disease. Posterior sclerosis must not be overlooked, and the surgeon should be on his guard against patients who are suffering from some systemic disease and have had their attention directed to their stomachs. The symptoms of appendicitis are ordinarily so frank and well known to you that we shall not enumerate them all; the history points to the appendix, the pain does not bear a definite relation to food, the attack comes on at any

time, at any age and in both sexes, the symptoms, it is true, first point to the epigastrium but they soon localize in the right iliac fossa; the pain is progressive and is not relieved by vomiting. There is usually an increased pulse rate, rise in temperature and leukocytosis.

Gallbladder disease is more common in women past the age of thirty-five. Biliary colic bears little or no relation to the ingestion of food, though most cases of cholecystitis are more comfortable when the ston ach is empty. The pain of gallbladder disease is pretty well confined to the right hypochondrium and radiates to the right shoulder. Pain is experienced by the patient during a deep inspiration when pressure is made at Mayo Robson's point as the examining hand is carried inward. In chronic gallbladder disease the color of the skin is significant and these patients are more or less uncomfortable all the time. Stone in the common or cystic ducts have such definite symptoms that the diagnosis of these conditions should be readily made. If the gallbladder and pylorus are pathologically connected by adhesions ulcer symptoms may be simulated.

In some cases of cardio-renal disease the gastric circulation is disturbed and the digestive functions are so greatly impaired that the patient may be treated for that common disease "stomach trouble" for some time before the true condition is discovered.

In the gastric crises of locomotor ataxia, the lack of coordination, lost knee jerks and Argyrll-Robertson pupils have been overlooked and the patient's abdomen has been opened for gallbladder disease or for ulcer. While the symptomatology of gastric and duodenal ulcers are much the same there are certain points which they do not have in common, hence it is important to diagnose between the two.

The complications of duodenal ulcer are severe or fatal hemorrhage, perforation, pyloric stenosis, obstruction of the common duct, and rarely carcinoma.

Once the diagnosis of chronic ulcer has been made the treatment is surgical.

The following are a few brief notes of case histories selected from our series because they are so typical:

Case Histories.

Male, aged 58. No. 2469.

Twenty years ago first noticed an uncomfortable feeling after eating; the kind of food that he ate did not make much difference in his feelings, but he soon found that if he ate frequently he was more comfortable. He was entirely free from symptoms for a year and a half. Pain now comes on exactly two hours after eating and is immediately relieved by taking food. He has very little belching and has only vomited twice in years, once when an attempt was made to pass a stomach tube for diagnostic purposes, and once two years ago at night he vomited several ounces of bright blood without any nausea. He looks fairly well, is off about ten pounds in weight, but never loses a day's work. He has a good deal of flatulence, and is inclined to be constipated. He is tender in the midline above the umbilicus, pain does not radiate but is confined to a spot the size of a silver dollar. For years this patient was diagnosed as a case of nervous indigestion by a number of medical men. Operation disclosed a large indurated ulcer the size of a hickory nut on the anterior wall of the duodenum. A posterior gastrojejunostomy gave immediate relief.

Male, aged 64. No. 2487.

History of stomach trouble for thirty years, pain which came on several hours after eating relieved by more food, vomited blood several times. For the last two years food has made him worse; he is never comfortable and vomits frequently to empty his stomach; both the vomitus and eructations are very acid. He has lost much flesh, and is very anaemic. His stomach holds three quarts with ease. Here the picture was one of gastric carcinoma with pyloric stenosis, but the early history pointed to ulcer. At operation an ulcer was found close to the pylorus, almost obliterating it.

Female, aged 36. No. 2509.

Thirteen years ago patient began to feel a dead aching pain in the epigastrium which did not move about but which would come and go; for weeks she would be comfortable and then the pain would come back. It came on from two to two and a half hours after eating. She belches up clear watery fluid which at times has been tinged with blood and which is very bitter. In this case we made a positive diagnosis of ulcer from the history and from the fact that she had led the life of a hard working man in addition to being a wife and mother, though the case had been sent to us as one of cholecystits. Operation showed a perfectly normal gallbladder and appendix and on the outer wall of the duodenum one inch from the pylorus there was a good sized ulcer. Gastrojejunostomy gave her great relief.

Male, aged 20. No. 2556.

Patient states that for three years he has been suffering with "indigestion," pain and heaviness in the stomach. He has a gnawing pain in the stomach which is relieved by eating but returns about two hours after meals as a kind of dull heaviness and persists until more food is taken. He has never vomited nor has he been trou-

bled with gaseous eructations. There has been slight loss of flesh. On operation a chronic appendix and a small ulcer on the posterior wall of the duodenum about two inches from the pylorus were found. A posterior gastrojejunostomy and appendectomy were performed and the patient's symptoms gradually cleared up.

Tests for Occult Blood.

Benzidine.—Macerate a small portion of feces in a little water, preferably in a mortar. Place in a test tube and boil. Ten to twelve drops of benzidine solution (which is made by placing a knife point full of benzidine in 2 c.c. of glacial acetic acid) are placed in a test tube together with 2½ to 3 c.c. of hydrogen peroxide; 1 to 3 drops of the boiled feces are then added. In the presence of occult blood the mixture will turn a blue or green color. (An excess of hydrogen peroxide may interfere with the development of the proper color).

Aloin.—Macerate a small portion of feces with a little water in a mortar. Pour into a test tube and add ether to extract the fats. Invert tube several times rather vigorously, and pour off supernatant ether; if the ether is at all discolored the operation should be repeated. Add 1-3 volume of glacial acetic acid to convert haemoglobin into haematin and thoroughly mix. Add ether to extract haematin; invert tube several times and set aside to settle.

Into another test tube place about 5 c.c. of aloin solution (made by dissolving a knife point full of aloin in about 10 c.c. of 70 per cent. alcohol) 5 c.c. of ethereal extract of haematin, 5 c.c. of ozonized turpentine; shake thoroughly and set aside. In the presence of occult blood an intense red color will develop in the lower portion of the fluid in from 2 to 10 minutes.

Obtain ethereal extract of haematin as in aloin test. Pour in test tube about 5 c.c. of the ethereal extract of haematin; add a few granules of gum guaiac and a few c.c. of hydrogen peroxide. In the presence of occult blood a violet or blue color will develop in the resultant mixture.

Intestinal Auto-Intoxication: Its Etiology with Report of a Case.*

By J. Rush Shull, M.D., Cliffside, N. C.

Intestinal auto-intoxication is a toxæmia produced by alteration in the digestive processes that are normally met with in the alimentary canal, such normal digestion including the products of activity of the enzymes of the stomach, pancreas and intestinal mucosa, and particularly the products of activity of certain bacteria found in the alimentary tract.

We know that nature has provided that so long as the mucosa of the organs are healthy, that is, free from inflammation or trauma, no absorption of toxic substances takes place from the normal contents of those organs—in the bladder from the urine and the intestines from the food.

It may be well to consider here just what constitutes these toxic substances and from what are they derived and how.

Normally the proteolytic enzymes, pepsin and trypsin convert the protein molecule into, first, albumoses and peptone; second, ammonia; third, diamino acids, and fourth, mon-amino acids of the aromotic and fatty series. Now these amino acids, as such, are absorbed through the healthy mucosa and taken up by the blood to supply the tissue cells of their individual needs, the excess being converted by the liver into urea. Micro-organisms also possess an enzyme action but they go further than the amino acid series and produce from it fatty and aromatic acids of a poisonous nature, such as phenol, indol, skatol, also methane carbon dioxide, hydrogen sulphide, etc. We know also that most epidemics of so-called ptomaine poisoning are due to bacteria. In a great many of these epidemics the following organisms have been identified: B-prteus, B-enteritidis and B-botulinus.

To recapitulate, then, we find that these toxic substances are the end-products of protein metabolism resulting from the ingestion of nitrogenous food which is acted on, first by the proteolytic enzyme, and secondly by micro-organisms normally found in the intestinal tract.

Since it is known that micro-organisms are actively engaged in the digestive processes of the intestine and that such intestines are looked upon as normal we come now to ask why, how, or when does intestinal toxæmia arise; since these substances normally result from protein metabolism.

In studying this further question we first revert to the normal. Here it has been shown that the cells of the intestinal mucosa absorb the diamino and mono-amino acids and synthesizes them into living proteins, that is, protein molecules capable of circulating in the blood stream, easily oxidized into urea, carbon dioxide and water, and at the same time supplying the cells of the body with their particular needs.

This function of the mucosa deprives the putrifactive bacteria of the material in which they produce toxins, providing the ingestion of protein has not been excessive. It has been demonstrated further that toxins introduced into the alimentary tract loose

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their toxicity. Using through the circulation a fatal dose of bacterial toxins it was demonstrated that fifty times this dose of the same toxins was without effect when introduced through the alimentary canal. The neutralization of the toxins was not produced by the gastric or intestinal juices since the results were the same after preliminary alkalinization of the stomach juice and after direct injection into the ilium.

When the intestinal mucosa is curetted or altered by drugs and heat the same dose of toxins becomes rapidly fatal. From these experiments we conclude that the cells of the mucosa therefore perform the function of gland cells, they act as dialyzers in retaining the colloid matters and attenuate the toxic products of protein metabolism. Thus we see that the mucosa acts as a filter and exerts a true anti-toxic function; therefore if it becomes inflamed or otherwise altered, as from the excessive heat of the summer months, its functions are engendered, allowing toxic bodies to pass into the circulation.

The bealth of the mucosa, as we see, plays an important role in intestinal auto-intoxication. What then are the factors that produce these changes in the mucosa rendering it incapable of performing its normal function?

The most potent factor, no doubt, is gastro-intestinal infection. This agency is operative early in life. Bacteria are present in the purest milk, on the cleanest of breasts, on nipples and on dirty objects sucked by the infant. Later in life when carious teeth appear we have a fruitful source for a constant bacterial contamination of all that proceeds into the gastro-intestinal tract. In gingivitis and receding gums bacterial activity is pronounced. The tonsils, nasopharynx, nose and its accessory sinuses, the middle ear, etc., these all afford sources for bacterial infection of the gastro-intestinal tract. Intestinal parasites are also causative.

When bacteria present in any part of the tract are numerous or virulent they damage the mucosa, and through such injured mucosæ bacterial toxins, bacteria themselves and food toxins pass directly into the blood and lymph streams constituting gastro-intestinal toxæmia.

In post-mortem examinations lesions of the whole gastro-intestinal mucosa ranging from simple catarrh to severe ulceration are observed. These lesions have existed in cases in which the presence of typhoid, tuberculosis, syphilis, bacillary and amœbic dysentery, pneumonia, and other specific organism diseases which are known to produce occasionally such intestinal lesions, were most particularly excluded by investigation. In quite a few of such cases so investigated a focus of bacterial infection was found somewhere in the beginning of the gastro-intestinal tract. The changes found in such mucosæ consisted in catarrh, atrophy and disappearance of villi, etc., also necrosis of the epithelium, and gross ulceration. In the presence of such lesions it is not difficult to understand why bacterial activity is increased and why the toxic products of such activity are readily absorbed.

These aromatic bodies produced by the putrifactive bacteria become excrementitious, incapable of oxidation to urea, etc., and while they are only slightly toxic individually they exercise, when combined, a very baleful influence on the body economy. During such absorption a certain amount of improperly hydrolized protein also passes into the blood stream. Here it acts as a foreign body and is expelled principally through the urine.

There is every grade of gastro-intestinal infection as is evidenced by the post-mortem finding in the mucosa. Differences in degree exist in all diseases, yet the fundamental processes in all degrees are the same. So with gastro-intestinal toxæmia, the graver inflammations of the mucosa are due to bacterial processes, viz., typhoid and dysentery, and result in toxic absorption, so only in a lesser degree are the milder forms of catarrh due to the activity of bacteria and result in toxic absorption.

Parasites also produce a certain amount of trauma and inflammation in the intestines and are therefore etiologic factors in this toxæmia.

In reading the current literature dealing with the subject of my paper one author summed up his indictment against gastro-intestinal infection as being the main cause for gastro-intestinal toxæmia by saying, "Hence my postulate that gastro-intestinal toxæmia does not exist apart from gastro-intestinal infection."

There are other factors to be considered as causes for intestinal toxæmia such as intestinal stasis, altered gastric juice, a too copious ingestion of protein, etc.

Clinically it has been demonstrated that intestinal putrifaction is diminished by limiting the intake of nitrogenous food, both as to quality and quantity. By substituting in the dietary such articles as milk, fresh cheese and farinaceous foods this is accomplished. This diet affords a minimum of residue to undergo putrifaction.

As regards intestinal stasis I am unable to state in my paper whether it is a cause or a result of intestinal auto-intoxication; and in a like manner I will have to dismiss the gastric juices.

Before closing this paper I want to say a

few words about indicanuria, since it is closely allied to intestinal toxæmia and is of value clinically. When albuminous substances are undergoing bacterial putrifaction in the intestines or are rapidly decomposing elsewhere in the body as in septic peritonitis or in empyema, indol is formed. Under similar conditions skatol is formed. It increases and decreases parallel with indol, both are equally significant, but indol is much more readily detected in the urine, hence we generally speak of indicanuria. Indol is increased when the quantity of protein ingested is in excess of the digestive powers, when the amino acids are not fully assimilated and where there is stagnation of the intestinal contents. When indol is absorbed from the intestines it is oxidized, forming indoxyl, and this is converted into a conjugate indoxyl sulphate of potassium, or as we best know it as indican. Indican is present in small quantities in normal urine. An increased amount of indican is found to exist when an excessive degree of intestinal putrifaction is taking place. Indicanuria sometimes serves to indicate a decreased proportion of Hcl. in gastric juice, since we find it in diseases exhibiting a hypochlorhydria such as gastric cancer and gastritis. In diseases of the small intestines where stasis occurs we also find indican in excessive amounts, but when the colon alone is affected, as in chronic constipation, indicanuria rarely exists. Progressive indicanuria often points to intestinal occlusion as in the case I will report.

Date, Sept. 16, 1913; Name, Arnold Cooper; Age 4; Sex, male; Race, white.

Chief complaint, according to his mother, was headache, vomiting, restlessness, fever and stupor with loss of appetite.

History.—Three days before I saw the patient he was found under a muscadine vine helping himself. Nothing developed from this gorge during the first twenty-four hours. On the second day, however, it was noticed that the child was not well. He was listless, refused food, made frequent attempts to vomit and had some fever. On the third day I saw him.

Previous Medical History.—Patient had a protracted diarrhea when eight months old. This lasted two months. When two years old he had scarlet fever. An otitis developed during the third week resulting in deafness. Since this illness the patient has been in fair health excepting that he caught cold easily and had several sore throats.

Family history negative.

Physical Examination.—On inspection the child appeared very ill. His cheeks were flushed, eyes bright and shiny. He was stuporous and paid very little attention to me. Teeth were in bad condition. Tongue was coated with a thick brownish fur, edges red. Cervical lymph nodes were easily palpable. Chest showed nothing abnormal. The abdomen was slightly distended. There was no rigidity present. The colon could be palpated, especially the sigmoid. Extremities were normal. The day before I saw the patient the bowels had moved four times, but had not moved since. Temperature was 101 4-5. Pulse 128. I prescribed castor oil, one oz., a soap suds enema and a liquid diet consisting of buttermilk, lemonade, grape juice and water. An examination of urine showed sp. gr. 1026 highly colored, acid, albumin and sugar negative with a marked reaction for indican. Eight hours later I saw the patient. He had had two small stools which were foul smelling. Temperature 102 1-2 and pulse 130. I ordered calomel 5 gr. divided doses to be followed in six hours by castor oil, one oz. High enema if free catharsis did not follow. On the fifth day I saw the patient again. The bowels had moved three times. I found on examining the stools a number of muscadine hulls and seeds. The abdomen was still distended and there was no rigidity. The patient had voided several times during the night. Temperature 102 1-2. Patient was still very toxic and slept a great deal. Urinalysis showed a slight trace of albumin. I prescribed milk of magnesia two drams Q. 4h. Castor oil oz. one Q. 8h. High enema Q. 6h. A hot bath to be given twice a day. On the sixth day the patient was some better. Bowels had moved four times freely. The stools were very offensive and contained many scybala. Temperature 102. Pulse 130. The colon was tender throughout its length. Urinalysis showed a moderate trace of albumin, indican and occult blood were found. I prescribed urotropin and pot. citrate. On the seventh day temperature 101, pulse 120. Bowels had moved eight times during the past 24 hours. A few muscadine seed were still being passed. The stools were not so offensive, the abdomen was soft with some tenderness along the colon. The tongue began to clear at the edges. During the next 24 hours the patient's general condition improved rapidly. He was hungry and took his nourishment readily. Temperature 99 2-5. Pulse 110. Bowels had moved six times. Urinalysis showed nothing remarkable. The patient made an uneventful recovery.

Discussion by Drs. Faison, Allen, Munroe, Mitchell, Glenn, Wilson, Haynes, etc.

Two Cases of Injury of the Eye.*

By Dr. John Hill Tucker, Charlotte, N. C

The cause, extent, care and results of an injury to the eye make in each event a case unto itself. There are not, nor can there be, laid down rules to follow. The simplest cause, such as a cinder on the cornea, may give rise to the gravest symptoms, for instance, an ulcer, which may destroy the usefulness of the eye. Whereas, severe blows with extensive injury may quickly disappear and leave a normal eye. 'Tis therefore, always a question of judgment on the part of the surgeon who must be relied upon to care for injured eyes. I may here add, parenthetically, that the loss of an eye is as great a loss to men doing only eye work, as the loss of a life is to a general surgeon or physician. Realizing this, there can be little wonder at the great consideration shown small things in doing eye work, for it is upon these details, which seem small and unnecessary to men working in the larger fields of surgery and medicine, that the real success in our work must depend.

In some instances of injured eyes it may be wise to use Esserine,or Pilocarpine, and in other injuries it is best to use atropine, drugs of opposite physiological properties, to prevent adhesions and subsequent incarceration of the iris at the point of injury, for so largely does the usefulness of the eye depend upon the movements of the iris and ciliary muscle that often an eye is permanently injured, if not destroyed, by the improper use of such drugs.

There are two cardinal points in the care of injured eyes, which like the never changing laws of nature, are always in order, namely:

First—Absolute rest, preferably by bandaging both eyes and putting the patient to bed.

Second—Aseptic care.

Two conditions too often minimized even by men interested in the eyes.

In substantiation of the above facts I beg to report two cases, which will tell their own tales:

On August 31st, 1912, I was called to see "H," a fourteen-year-old son of an Army Officer whose training was preparatory to entering West Point, and whose chief aspiration in life was to become an Army Officer, which ambition could never be realized in the event of the loss of an eye. Therefore, you may well imagine the state of depression and excitement I found my patient and his family in when the following history was given:

Half an hour before, while splitting up stove wood, a glancing stroke of the axe caused a stick of wood to fly up and strike him a severe blow in right eye.

Examination of eye showed lids bruised and swollen, and a slight cut over the brow. There had occurred an intraocular hemorrhage which completely filled the anterior chamber with dark venous blood. With the uninjured eye covered the patient could not see a lighted candle when held within two inches of eye. Patient complained of pain, and was very nervous. Of course, I was frequently asked if the eye would be permanently lost. To reassure my patient I told him no, I thought if he would do as I ordered the eye could be saved. He was put to bed and alternate applications of heat and cold were applied for ten minutes every hour, to both eyes, and between times both eyes were snugly bandaged. There being no light perception, I felt sure there was a contracted or closed pupil behind the blood, so two (2) drops of a 1% solution of atropia sulph. in a saturated solution of boracic acid were instilled into the eye. An hour after the use of the atropia, patient could locate the light from candle and the paroxysms of pain were relieved. Twenty-four hours after injury, there was a considerable ciliary congestion and the blood in the anterior chamber had clotted and settled in lower half of chamber. The upper part of iris could be seen and the pupil was partially dilated from the atropine solution. There was a decided increase of intraocular tension and patient complained of pain in eye. The patient could see and recognize faces with the eye. Hot applications for ten (10) minutes were ordered every two hours and the patient instructed to remain quietly in bed with both eyes closed. Forty-eight hours after accident, vision was gradually returning to the eye, when suddenly after a slight coughing spell, the eye became blind again. I was 'phoned for in great haste, and found the patient much excited and depressed to find that he could not count fingers at any distance. Upon examination, I found the clot of blood had broken up and the anterior chamber was filled with a muddy fluid as if a partially organized clot of blood was dissolved in aqueous fluid of the anterior chamber, and another slight hemorrhage had occurred. I reassured the patient and told him I thought what had happened would hasten absorption of blood. I may finish the report of this by saying:

Twelve days after the injury, all blood had been absorbed, there was a diopter of astigmatism according to optholmonter,

*Read before the Seventh District Medical Society of North Carolina which was recently held at Lincolnton, N. C.

with which correction vision was normal. However, glasses were not ordered and the patient was urged not to use eyes for near work. The refractive error was closely watched and the astigmatism gradually disappeared until the thirtieth (30th) day after accident there was less than a fourth of a diopter, and vision in both eyes 20 15 without glasses. The last time patient was seen, ten months after accident, eyes were normal and he again expects to enter West Point.

Two facts I wish to leave with you about this case:

First.—How quickly by rest and the proper care, a severely injured eye returned to its normal state.

Second.—How unnecessary it would have been to have given an astigmatic lens and possibly made his astigmatism a permanent condition. For I am convinced of the fact that a normal eye can be rendered astigmatic by the constant use of a cylinder glass—a condition too often caused by young people buying glasses for simple eye complaints.

The other case I wish to report was a case singularly like the first, so far as accident and injury were concerned, but the care and result was so entirely different from the first case, I feel it is interesting to report the two in conjunction.

A boy eighteen years old, while cutting down trees in the woods, was struck in the eye by a chip, which caused a slight hemorrhage in the anterior chamber. I did not see the case until the fourth day after the accident, and at that time there was a small unabsorbed clot of blood in the anterior chamber, there was an iritis and the ciliary region was deeply injected and showed evidences of an irido-clyclitis, the vision was very blurred, though he could see to count fingers within a few feet of the eye, there was a decided increase of intra-ocular tension in the injured eye.

The patient was put to bed and applications of heat and cold applied as in the first case. A purgative was given and both eyes closed by the applications. I might add, at the time he entered the hospital, he complained of great pain, in fact, it was this symptom of pain which caused him to come to Charlotte. As this pain did not subside and the intra-ocular tension increased and vision decreased, until within twelve hours after entering the hospital he had only light perception, and with his glaucoma I did not like to use atropine, especially as the pupil was widely dilated, so advised doing a paracentesis—letting the fluid from the anterior chamber temporarily relieved the pain, however, there was a return of pain within a few hours and also of tension, so thought best to do an iridectomy, which operation relieved the pain, but due to the great tension and inflammation it was with difficulty that the pillows were restored and the iris became incarcerated in the wound; however, by establishing drainage, the glaucoma was relieved and the inflammation of the eye gradually subsided. To briefly finish the report of this case, I may add that the eye developed about five (5) diopters of a minim astigmatism with which correction his vision could be brought up to 20-70, but with a normal eye on one side, and such a correction on the other, it was not practical for the patient to wear glasses, and he is only using one eye.

Now of course, it is only an unscientific speculation to assume had this eye been seen by a physician promptly and the proper remedial agents at once resorted to, such as atropine and absolute rest, that the eye would have been saved.

My real excuse for reporting these two cases is that they happened so nearly together in patients of the same age, in accidents almost identical, the one from a few minutes after the injury properly cared for, the other uncared for for three days after the accident. It gives an opportunity to impress the great necessity of early and proper care in cases of injury to the eye, for when I repeat, for an eye man to lose an eye is to him what a life is to a general surgeon, one can realize such feelings about the details of our work, and it is no wonder that it is with a shudder we often see most excellent men deliberately pull open the lids of a patient going under an anesthetic, and touching the cornea to see if its reflex is still there. A part of the anatomy so important to the possessor and so poorly supplied with blood might be permanently and painfully injured by such a gentle touch.

Surgical Europe and Great Britain.*

By C, M. Strong, M.D., Charlotte, N. C.

In a very superficial way I will attempt to give you what was intensely interesting to me of a recent trip abroad. This was made possible by the Physician's Study Tour, an organization whose purpose it is to take a limited number of American physicians to other countries each year, so that they may study the countries medically and surgically. In this way you can see more of the inner sanctuary than could be done by a long sojourn alone, arrangements having been made with the local societies of France, Bavaria, Austria, Bohemia, Ger-

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many, Belgium, Holland and Great Britain, which countries we visited. The hospitals, laboratories, clinics, museums, private homes of the physicians, and medical societies were open to us.

This year's tour was the first made by American physicians; last year 200 German physicians made a tour of America. In 1915 a tour of the Orient is projected.

The tour this year was finished up at the 17th International Congress at London.

The party was composed of 50 physicians with their wives and sweethearts, making a total of 69. We left New York on July 3rd, and the nine days on the boat were spent most pleasantly and profitably, lectures being delivered by some of the leading specialists of America.

Paris, the gay, was the first city visited. We were there the Gala Week, July 14th being their Independence Day, and all France seemed to be in Paris. It was more than gay, and for this reason we did not see as much of the city medically as we wished; however, we visited some of their famous hospitals and saw some of their surgical masters. Among the hospitals we visited were Diu, which is 1000 years old, La Petie 700 years, and St. Petrie 800 years old. It is very surprising how they have modernized these old hospitals.

Pasteur's original Institute was visited; we felt awed when we stood with bowed heads at his beautiful mausoleum. The spirit of modern asepsis sleeps there.

Pozzi, the gynæcologist, was seen in action. Among the operations was a panhysterectomy for multiple fibroids, which was done in 27 minutes, and a vaginal Cæsarean section in 15 minutes, which showed him to be a high geared man.

The French surgeons are dexterous, but a little shy on asepsis.

Widall, the laboratory wizzard was seen in his shop, and is using live typhoid bacilli as an immunizer, (not on any of us, however).

From Paris we went to Munich, the capital of Bavaria, a very attractive city of 600,000 inhabitants, where we were most royally entertained by the medical society and city.

One of the finest and most modern hospitals in the world has recently been opened in Munich at a cost of $4,000,000. There is nothing in America that can compare with it. Instead of the many small hospitals as we have here, they have what we would call national hospitals, built, equipped and supported by the government, and every appliance known is found in them

Munich is fast becoming a world medical centre. Here we had clinics from Dr. Mueller, the lung man, and other great teachers.

Vienna, as Stoddard expressed it, where the Crescent and the Cross, the Saracen and Crusader touch, is situated on the Blau Donno (Blue Danube), and is possibly the world's greatest medical centre, and, of course, makes it a place of great interest to the medical man.

The Alegemaine Krankenhaus (German Hospital) of over 6000 beds, and probably the largest in the world, was where we had the greatest feast of clinics.

Eiselberg showed 10 cases of heart wounds which had been successfully sutured.

Doerdelein's Gyn clinic was enjoyed. Here we saw some wonderful results of plastic surgery in which they greatly excel us, noses, lips, faces, and ears as good as new are made. An apparently successful case of transplanting a hyperthyroid gland into that of a cretin was shown.

Werthein was seen in two cases of his radical operation for cancer of uterus, and they are radical indeed. He takes out all of the lymphatic bearing area of the pelvis and vagina, lays bear the ureters, nerves, and blood vessels, apparently leaving nothing else but bone. He literally inverts the patient. During the operation he wears only an apron, his hands and arms being bare, and he uses chloroform; the operation reminds you of a butcher evicerating a hog. However, his record shows that out of more than 800 cases 15% of cures were shown after 5 years; many of these are considered inoperable cases by the average surgeon.

We were dined and wined like Kings, and were shown over the city by the great Lorenz, who has become wealthy and has been Baroneted. He has now retired and lives in a castle where some of our party were entertained.

Another commendable thing they do is to pension their great medical men, who with their families they hold in great esteem; let us commence right now in this district.

We next visited the great watering places of Austria and Germany, Carlsbad, Baden, Wiesbaden and Homberg, which were all a revelation to me. These places are kept up by the world's wealthy, principally the Americans. No expense is spared to beautify and perfect the entertainment, and probably the cure of the visitors. They take every advantage of nature to bring in tons of gold, while in North Carolina we have a spar as beautiful for situation and efficacious in thermal and chemical effects as theirs, going to waste. I refer to the Hot Springs of North Carolina. Besides we have the same means of heating the water artificially as they; for did we not see the heating plant in operation.

Berlin, the Imperial City, was next visited; it is the most modern of all of the European cities. It is a great surgical centre, and more attention is given to it, probably because it is modern. Clinics by Fratz, Bier, the hyperæmia man, Wassermann and his guinea pig barn, and Maree, the nerve specialist, were all worth whtle.

On reaching Frankfort on the Main, the great Ehrlich took us in tow, and showed us into the mysteries of his work and life, and, like the fine gentleman that he is, stayed with us all day, showed us over the city, fed and watered us. (They have no water over there). Upon a whole, this was one of the most pleasant days I have ever spent.

Up the historic Rhine we went in a palatial steamer, saw where Caesar and Blutcher crossed the Rhine, and then passed Bingen Sweet Bingen on the Rhine, to Cologne, the ancient cathedral city. Here we were surprised to find a splendid modern hospital, presided over by a former American physician, where the facilities for postgraduate work were as good as can be found anywhere.

Our German tour ended here, and it was estimated that fully $10,000 was spent there for our entertainment.

We were only one day in Belgium, but saw a very fine private hospital where surgical clinics were shown by Dr DePage. The medical society took us out to Waterloo, in their private cars; we felt very sorry for poor Napoleon who with 75,000 picked men was defeated by 65,000 raw recruits.

Windmill Holland was next; there tired out we balked on medicine and entertainment, so went to eating sourkrout and drinking beer.

London, the greatest city in the world, was our mecca. At the Congress we saw all the surgery we could digest—good, bad and indifferent. I might mention Lane, we saw him do several complete colectomies with eight inches of illium for stasis, and strange to say he had 30 healthy looking survivors.

We found the English surgeons supercilious and satisfied, and rather clumsy.

In Edinburgh, Scotland, they have a really up-to-date postgraduate school, on the American plan, and I believe for one like myself, who does not understand any other language, this is the best place to go for foreign work.

I wish to digress here to speak of the nurses of Europe. Except in Great Britain, they require two years training. Their training is practical and they have only the last three months for theoretical work, which is done at a central school in each city, and there the diplomas are given. In some places the first year nurses cook for the second year nurses, thus getting practical dietetics. They may also take one year in obstetrics afterwards. from this they graduate as midwives, and do all the uncomplicated work, and are very proficient. I saw two deliveries in a few minutes of each other in the Maternity Hospital of Paris, and was struck with the nurses knowledge of asepsis, and management of labor. I wonder if this would not be a good thing for us. Women seem to be the logical ones for this work, and this training, in my opinion, would prevent a great many cases of puerperal sepsis, and they can afford to do it cheaper than the doctors, besides it takes a great burden off the physician. Is it not a fact that physicians do not make anything out of obstetrics, and it disarranges their routine of work. Surgically the nurse takes a back seat in Europe; she never assists, only does the menial work.

Every surgeon has about 12 assistants, some of them gray headed men waiting and praying for their Chief to die.

The old world nurse is not the "whole cheese" in Europe, but is not afraid of menial work, and does not know more surgery than the surgeon.

I thought again an interchange of our system would help both.

The nurse when disabled is not thrown out on a dump heap of charity, but homes are provided by the Government in some beautiful spot in the mountains, where she spends her latter days in peace.

After seeing probably the best side of centralized government in the control of medicine, railroad, telegraph and telephone companies, I am a convert to its principles, fully aware of the dangers, which, however, are not great in this enlightened age.

Along civic lines Europe has us beat, every spot is made pleasing to the eye, privet hedges are planted along the railroad tracks, artistic bridges are built across all little streams, and running flowers are planted on all telegraph and telephone poles; these were in full bloom when we were there. They have many fountains, parks, playgrounds and yards, which are all well kept. Everywhere music is furnished free by the government. They have safe and cheap transportation, and national preservation of health and life.

The universal politeness, the good and honest service of maids and attendants at Hotels, etc., make a trip to Europe a very pleasant memory.

The world is becoming so closely in touch that the differences in surgical work is not so great; however, the old world can teach us much. It can tell us to be more patient, to do things more thoroughly, and not to

operate without more and better diagnosis. To have better equipped hospitals, more scientific men connected with them, and not to cut everything in sight, to act advisedly.

They work while they work and play while they play, we work while we play, thus soon become prematurely old and either die early or are laid on the shelf. I saw men 80 years of age still working.

Old Europe can learn much from Virile America, and Virile America much from Old Europe.

Medical Inspection of Rural School Children.*

By Roy K. Flannagan, M.D., Richmond, Va.: Director of Inspections, State Board of Health of Virginia.

"The child is the father of the man."

"As the twig is bent so is the tree inclined."

"Great oaks from little acorns grow."

Any of these quotations will suit as a text for a discourse on school inspection.

The Criterion.—The school is the great State institution for the development of the right kind of citizenship, the place where the raw material Childhood is polished and moulded by knowledge and training into a manhood or a womanhood which will honor and bless the Commonwealth.

The school takes the little human twig as it is transplanted there from the home, and straightens it and supports it as it grows, until vigorous and ripened the tree of its life bears opulent fruit for the nation.

Great shall be the oak from the little acorn when the school in a large sense shall fulfill its high purpose. For the condition precedent to a sturdy oak is a sound acorn. The antecedent of a life rich in flower and fruit must be the straight twig of a healthy and unencumbered childhood, and under the laws of life the foundation of a manhood strong in power and purpose cannot be less in the child than a sound body, the fit abiding place of a sound mind.

The Cart Before the Horse.—Western civilization almost invariably reaches its aims by pursuing a reverse order process, and so, illogical as it may seem when we look at it calmly, the mental and moral aspects of the school child have for long been the only considerations worthy of the school men's thought. The tender shoots of humanity for generations crowded into the hot-bed of school life have been subject to all the influences that go to make a hot-bed product spindling and weak. Mental and intellectual fertilizers in method and educational appliances have stimulated the growth of precocious minds at the expense of that stamina of the body which alone can make intellectual vigor, a real asset to the State.

An awakening, however, seems near, many cities of the country and a few States have backed at last into the startling discovery that a child cannot grow straight any more than can a stalk of corn, if a weight is bearing it down, and so these cities and States are endeavoring to find out which children in the school are burdened with obstructions to their physical development, and then when stumbling blocks are found are consistently setting about to remove them. This is what medical inspection implies and it is the adoption of this procedure that now constitutes the hall mark of progress in city, town and country.

Penny Wisdom.—If defects in children were few and far between some excuse might be offered for remaining unprogressive and careless. For the ill health of those few little ones tied to the stake of a false economy in full sight of their more fortunate fellows, perhaps would not affect adversely the grand total of high grade citizenship turned out, but when by actual count eighty-five out of every one hundred children going to school have been shown to be defective in some way, it is time that every person who knows the facts, and certainly every doctor, shall in his community insist that the physical condition of the school child be at least known.

An Empty Boast.—It will perhaps be urged "that the city child is in a different class from country children, that the free open life of the farm and field raises a sturdier race that needs no inspection, while the cramped quarters and the vitiated air of the city streets necessarily enfeebles those so unfortunate as to live within corporate bounds. Therefore let the city have its school inspection frills; it needs them and can pay for them, but country folk are fortunately superior to such things."

Stubborn Things.—The above boast sounds like reason, but it is simply noise. The fact is that the country child is less healthful than the city child. A recent inspection of 1800 children in a Virginia county developed the fact that 27 per cent. of the one-room rural white school children had defective eyesight. Something like 10 per cent. had defective hearing. Thirty per cent. had enlarged tonsils, while even more had enlarged adenoids. Nearly 50 per cent. had bad teeth, the defects being more in the permanent than in the temporary. Twelve per cent. were suffering from glandular neck enlargements, while 25 per cent. of all white country children

*Read before the 18th annual session of the Seaboard Medical Association of Virginia and North Carolina at Norfolk December 10, 1913.

inspected showed poorly nourished bodies. The inspectors found that the rosy cheeked youngster was the exception, and made a special note when a plump pupil stepped on the scales. There was 30 per cent. plainly visible anæmia among these country children, and of those furnishing specimens for hookworm test 25½ per cent. showed its presence.

These figures are in excess of those for the country over which are mainly compiled from city statistics. To the candid mind this clearly demonstrates, at least so far as this county is concerned, that the healthy, robust, apple-cheeked child of the farm is a diminishing factor.

Thou Art The Man.—Upon the physicians scattered throughout the rural districts rests the responsibility of restoring the old time glow of health to the country child. These busy men are now called upon to cure active and manifest disease which smites the farmers household. Upon them also must fall the burden of checking those hidden influences which pluck the roses from the cheeks of the farmer's child, and tend to check that virile stream of country manhood upon which the nation has in time past so largely depended.

A Running Start.—Ways and means must be devised. Knowledge of the facts must be disseminated, and community effort must be organized to definitely apply corrective forces to the problem. That this may be done speedily and efficiently, the physician must take the lead. To do this he must possess the traditional social conscience that has long been the boast of the medical profession, for without it the doctor, however skilled, is but a tradesman earning a living instead of a scientific helper of mankind. The needs of the community must stand out in his mind as paramount and he must be prepared to bestow disinterested service.

It is suggested that he, by a visit to the schools in his field of practice, acquaint himself with the general features of the problem. A rough estimate of the cases of anæmia and malnutrition may easily be made. Standing all the children of the same ages up together will doubtless prove an illuminating experiment. The school buildings and surroundings, too, might come in for a preliminary survey and enough ammunition be stored in fifteen minutes for a broadside at the proper time. If with these facts he will call upon the school superintendent and gain his interest, or upon some influential school trustee, he has laid a sure foundation.

In every locality there are people wide awake enough to move effectively if once started. These people naturally gravitate together and usually school and civic leagues or clubs are the expression of the desire in them to be helpful to their day and generation. Such an organization in possession of the doctor's facts may be counted on to furnish the momentum ror a real school inspection.

The chances are that the doctor will have to volunteer to inspect the neighborhood school. If he is not a volunteer helper he will not have gone this far anyway, so it is fair to assume that he will offer his services free in the beginning.

Means and Methods.—A visit of a day or two to city schools having medical inspection should serve to qualify any well grounded man in the essentials necessary for good work. The things he will need are: a head mirror, a stethoscope with a bell (not a diaphragm), an ear speculum, a Snellen's eye testing card and some wooden tongue depressors.

A one-room school can best be inspected by taking the boys first as the girls are more apt to be nervous, and watching the simple procedure of inspection will reassure them.

A stool or chair should be set next the window through which comes the best light, and with the help of the head mirror the throat, nose, ears and teeth of the first boy in line should be inspected. Care should be taken to have the teacher record all the facts gathered, on a previously ruled sheet of paper, with the name and address of the pupil opposite. The apices of both lungs should then be examined, loosening the collars only. Only such examination of the heart as may be made through the clothing will be advisable, and anything suspicious found may be reserved for a more careful examination later. It should be remembered that this is inspection, not examination, and in the nature of things some obscure conditions will fail of discovery.

Bodily deformities and general nutrition, eruptions of skin, skin color, enlargements of cervical glands and vaccination marks should also be recorded. The Snellen's card should then be hung against one end of the room in a good light and 20 feet marked off from it. If the letters can be read on the line marked 20, normal vision is roughly indicated. Some one should stand by the pupil with a card or book obscuring one eye, both eyes remaining open. Normal vision is expressed fractionally as $\frac{20}{20}$. The degree of defective vision is indicated by the ability to read the other lines on the card and is expressed as $\frac{20}{30}$ or 2-3 normal vision, $\frac{20}{40}$ or ½ normal as the case may be.

To inspect hearing, the normal is shown by the ability to hear the tick of a closed case watch at a distance of from 1½ to 2

feet; each ear should of course be tested separately.

When the inspection of the boys is made they should be sent to the play ground and the girls then subjected to the same tests.

The Need and the Needy.—When the school has been inspected and the defects of the children noted, the real work has but begun. Corrective measures must be applied. The facts learned must not become common property, but *parents* must be informed and induced if possible to see to the cure of the defective condition from which their little ones suffer. A large proportion of parents have but to know the need to do what is necessary, but there are a number who from poverty, ignorance or heedlessness can or will do absolutely nothing. These constitute the main problem and upon them must the social forces of the community be brought to bear.

The homes of all defective children whose parents cannot or will not attend to their children's needs must be visited, and a wise way must be found to connect up the doctor or the dentist with that household. Volunteer aid will not do for such work, only a tried and experienced helper can deal with such a situation. It is at this point that the community leagues can show their highest value. Money must be raised to put such a visitor in the field and to provide the means of getting about.

The Evangel.—The proper person must be selected and a wise supervision and moral support organized to back up the visitors work. A few small communities in Virginia already employ visiting nurses whose services are of untold benefit to them.

By a widespread and sympathetic cooperation, it is possible to harness to our rural life this tremendous agency for good and incidentally to increase the value of our schools by at least twenty-five per cent.

A trained social service worker, preferably a nurse, would be ideal for such a position. Many neighborhoods, however, already have at their command a tactful saint whose ministrations have qualified her for a wider field. It might be the part of wisdom to make *her* the evangel of good health to the community instead of a stranger.

The Field.—The school district could constitute the field of service, and the yearly inspection of all the schools will furnish material which will keep this real missionary busy. The object lesson of such an inspection and district visiting is bound quickly to induce the county and school authorities to adopt and adequately pay for an organized medical inspection.

I make no apologies for dwelling at length upon the social servant phase of medical inspection for I regard it as fundamental. The medical inspector discovers the physical defect and the nurse sees that health to the child follows that discovery.

The Man of Samaria.—Fellow physicians, in inviting your initiative in medical school inspection, have I outlined more than you are willing to undertake? I think not. Since you first entered the practice of medicine, day in and day out you have studied the physical needs of your people. Busy you are, but never too busy to help a sick child, and so not upon you rests the condemnation for neglecting the "least of these."

With confidence, therefore, I bring to your attention the country school child who though not bedridden has been demonstrated to be at least twenty-five per cent. below normal. Disprove this allegation if you can, but let it not be said that you heard such a call to the service of childhood and passed by on the other side.

A Peculiar Case.*

By T. M. McCoy, M.D., Mount Holly, N. C.

Patient male, 3½ years old, family history negative, previous health good.

He was taken sick July 27th, 1912. After two days malaise with loss of appetite accompanied by stupor and constipation, patient began to vomit about once in six hours almost a pint of dark colored fluid. The vomiting was projectile in character.

On third day he became unconscious and there was twitching of the muscles, affecting first the right hand and arm, then right leg and foot. The left leg and foot then became affected, afterward the left arm and face. By the end of the first week all the muscles of the body were involved.

At this time the eyes became affected. The pupils would be widely dilated for a few hours, become normal, and then minutely contracted. Sometimes there was strabismus and again the eyeballs would be rolled back, completely hiding the pupil and iris.

For two days during the second week there was retention of urine and opisthotonos. He slept fairly well throughout the attack, but the muscular spasms never ceased even during sleep. During the second week also his feet and toes became rigidly extended, and remained so for the entire three months. All reflexes were entirely absent.

Constipation became obstinate with abdomen greatly distended. After exhausting

*Read at the Seventh District Medical Society of North Carolina which was recently held at Lincolnton, N, C.

all ordinary means of evacuating the bowels, such as the common purgatives and high colon enemas, he was given three drops of croton oil on third day of attack, dose being repeated in eight hours without result. Bowels acted freely and voluntarily on evening of fifth day. His appetite was good but digestion poor throughout his sickness.

His temperature, pulse, and respiration were normal until the fifth day when they first rose to 102 and stayed there with little variation for three months. Spinal fluid negative macroscopically and microscopically.

Treatment given was symptomatic. In connection with two grains of urotropin three times a day, I gave 5 c.c. Neisser's Mixed Bacterin (gonococci eliminated) every other day for two weeks administered hypodermatically.

At the end of third month patient began to improve. Temperature declined, abdominal distention decreased, spasms became less severe, and consciousness began to return. This improvement continued slowly until all symptoms had disappeared except inability to speak. He had made no sound except crying during his entire illness. He never spoke for almost ten months from the beginning of his attack.

Six months after his seizure he was able to stand alone and take a few steps. At the end of nine months his health was perfect. He could walk, run, jump, and climb. He understood all that was said to him, played all day and slept all night. He went on errands for his father and mother, remembering all they told him to get or do. In fact, he seemed unusually bright but still unable to talk much.

On August 31st, 1913, about thirteen months from date of his first attack, he was taken with same symptoms as before, except more violent, and died in thirty-six hours from spasms of the respiratory muscles.

This case was seen by quite a number of physicians, among whom were two specialists. They diagnosed it as a very rare form of acute anterior poliomyelitis.

Pellagra and Pellagra Sine Pellagra. What Is It?

By C. G. Roehr, M.D., Fort Pierce, Florida.

We know that the great predisposing etiological factor is toxæmia (so-called pellagra sine pellagra). We know that this is a result of the use of mouldy corn in Italy, chemically preserved foods in America (this includes our bleached flour and sugar) amœba and other intestinal parasites distributed on uncooked vegetables, (especially in the tropics) fission fungi infection with septicæmia, pregnancy with its toxic possibilities, even psycho-pathological function giving us retention toxæmia. When chronic toxæmia is complicated with local irritation, such as rhustox, gnats, flies, itch, sunburn, or any of the seasonal irritants, it is liable to be called pellagra.

Would it not be well for us as scientific medical men to cut out such diagnostic disguises, as scrofula, dropsy, rheumatism, convulsions, pellagra, neuralgia, etc.? Why not keep such terms where they belong, as names of *symptoms* only and not frighten the ignorant by telling one he has dropsy if he happens to have œdema caused by worms and curable by a little thymol; or another, you have pellagra, when it may only be necessary to use emetin, or rhus or Hg, or eat pure food?

And last, but not least, why not educate the people for their self-protection in such matters as chronic poisoning by food preservatives instead of psychologically wiping the soul out of them, as well as disgracing the country undeservedly by branding the United States with the medical bugaboo *pellagra*.

I wish to report thirteen (13) cases previously erroneously called pellagra, as follows:

1. Diagnosis, Leprosy; Treatment..... Resutl, Returned to Nassau, B. P.
2. Diagnosis, Syphilis; Treatment, Specific. Result, Apparent Cure.
3. Diagnosis, Syphilis and Rhustox; Treatment, Specific and Rhustox (1); Apparent Cure.
4. Diagnosis, Amœba and Septic ulcers intestinal (2); Treatment, Intestinal Antiseptics; Result; Died.
5. Diagnosis, Amœba and gnats; Treatment, Emetin; Result, Cured.
6. Diagnosis, Amœba and sunburn; Treatment, Emetin; Result, Cured.
7. Diagnosis, Amœba and vermes; Treatment, Emetin and thymol; Result, Cured.
8. Diagnosis, Amœba and jelly fish tox; Treatment, Emetin and quit fishing; Result, Cured.
9. Diagnosis, Amœba and chronic rhus tox; Treatment, Emetin and rhus tox; Result, Cured.
10. Diagnosis, Amœba and chronic rhus tox; Treatment, Emetin and rhus tox; Result, Cured.
11. Diagnosis, Jelly fish tox and rhus tox; Treatment, Stopped fishing and rhustox; Result, Improved; Resumed fishing, Recurred.
12. Diagnosis, Meningitis(3) cerebrospinal; Treatment, ... ; Result, Died.
13. Diagnosis, Chronic rhus; Treatment, Rhus tox; Result, Cured.

(1) I use the Indian remedy to cure and immunize against rhus tox poisoning—administer internally.

(2) I had this case before we knew how to use emetin.

(3) Post-mortem proved it cerebro-spinal meningitis purulent (diplococcus). In this case one doctor said it was typhoid; another one said tongue proved *pellagra* and basillar symptoms were toxic pellagra.

Discussion invited in the Charlotte Medical Journal.

Two Years' Experience with Salvarsan.—Malcolm Morris and MacCormac state in The London Medical Lancet that in all their primary cases the disease has been immediately arrested, and in none which they have been able to follow up have secondary symptoms developed, with the exception of sore throat. In secondary and tertiary cases the skin lesions, without a single exception, have rapidly disappeared. They did not rely solely upon salvarsan, but supplemented it with mercury wherever patients could be prevailed upon to take a course of that drug. Even then their cases have not been free from recrudescence. In a few instances the patients have returned after two or in some cases three injections, with a complete relapse. In all of the secondary cases there has been a rapid disappearance not only of cutaneous but also of mucous membrane lesions. The rash has quickly faded, but some pigmentation has usually persisted for a considerable time. The general condition also has greatly benefited, the appetite improving, and the patients putting on weight and gaining color. In the group of tertiary cases, even in case that had proved obdurate to mercury and iodide of potassium vigorously and perseveringly administered, the authors have not had a single failure where the integumentary system was attacked. Almost as much may be said of lesions of the tongue. As between the salvarsan and neosalvarsan, the results inclined the Dr's. to give the preference to the earlier one. Neosalvarsan is not only less stable than salvarsan, so that unless it be used at once its toxicity may be intensified to the danger point, but it is less rapid in its effects, lesions disappearing less readily under its influence, and the Wassermann reaction remaining positive longer. Although salvarsan may in some cases abort the disease in the primary stage, and may effect a permanent cure in later stages, these results cannot be confidently counted upon, and prudence dictates that in every case this remedy should be supplemented by a course of mercury. On the other hand, that salvarsan has a more rapid and powerful effect upon the spirochæte than mercury seems indisputable. In some of the authors' cases malignant and less severe types of syphilis that had proved absolutely resistant to mercury, or to mercury plus potassium iodide, have promptly yielded to salvarsan. With mercury alone, however administered, lesions are much more persistent, and in nearly all cases the Wassermann reaction remains positive during the first year and in about a third of the cases for over two years.

A New Method of Dealing with Scars.—Tubby, in The British Medical Journal, describes a method which he has employed in the treatment of scars of very considerable dimensions, in the axillæ, in the groin, about the neck, at the wrist, and on the fingers. Having frequently failed to obtain any satisfactory result by excision of scar tissue, even if followed by extensive skin grafting, he devised the following original method: With a fine and strong-backed tenotomy knife a large number of multiple incisions are made transversely to the bands of keloid material. The incisions are placed close together, not more than one-tenth of an inch apart; and great care is taken that they should penetrate not only into the subcutaneous fat, but also extend one-quarter or half an inch into the neighboring healthy skin. No attempt is made to arrest the hemorrhage except by pressure, and when bleeding has ceased, a solution of thiosinamine is vigorously rubbed in; and, if the scar tissue is very thick, a few drops are injected into the most prominent bands. He has had no hesitation in injecting, in children, 15 minims at a time, and in adults 20 minims; in only one case was there any effect on the heart. In that instance some slight cardiac collapse occurred for a few minutes; the patient, however, was over sixty years of age, and, happily, no permanent ill results followed. After the operation the part is put up on a splint, in as much extension as possible, without tearing the soft parts, and is allowed to heal. This is accompanied by no excessive reaction and very little pain. He believes that the absence of those signs is due to the fact that the thiosinamine is not pent up within the tissues, but freely exudes through the incision. After ten or fourteen days the wound will be healed, and the mobility of the part is increased by 50 per cent. The operation is then repeated, and it rarely may be required three or four times. The result is most satisfactory; scars which have been tough, resistant, and, in the case of the fingers, wire-like, have become soft and supple, the part has regained its mobility, and its usefulness has been restored.

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EFFECT OF PAIN AND SHOCK ON OPERATIVE MORTALITY.

It is probable that shock value is largely a personal factor, or physiological function, yet it is true there are racial as well as individual values—it is a common observation that the hyperthyroidal Swiss has a higher shock value than the excitable Italian, and the lively Frenchman is more easily perturbed than the phlegmatic German.

The phenomena of pain and shock and its relation to mortality has been known for centuries and clinically studied by many ancient as well as modern writers, yet it is strangely disregarded by the rank and file of physicians and surgeons of the present day. Crile more than any other writer has called attention to this important and oft neglected factor that decides the fate of the border-line case.

What we term shock is undoubtedly a defensive reaction of the automatic nervous system against assault that has been committed. If it was not for the protective influence of shock we would succumb more quickly and the reaction would be more intense than now occurs. It may fail at times or even be too intense for the safety of the individual, but the fact remains that, as Crile has pointed out, the shock mechanism is one forged many generations ago in the history of the race, when some apparatus was necessary to secure instant preparation for flight or withdrawal on occasion of danger.

The most intense form of shock is commonly regarded as those cases of sudden death where there is no precedent disease, death by inhibition, death brought about by events that produce no obvious lesion, death following immersion in water before the patient has had time to drown, death following a simple operation where the pulse and respiration remain normal until death occurs from respiratory failure. When, on the other hand, shock falls short of death, there may be profound shock for 24 to 48 hours, which terminates in death or gradual recovery. This is the common kind of shock from which people saffer after serious injury or operation.

The shock value of an individual varies from time to time, and different parts of the body have different shock values. A blow below the belt will cause acute distress while the same blow on the chest will pass unnoticed. Another element is that of unpreparedness, a false step in the dark may momentarily shake the nerves of the strongest man. A piece of bad news or a terrifying sight produces a distinct psychic shock or trauma. Many people have indeed died of simple fright. The latest investigators have clearly shown that there is a definite and intimate connection between death from inhibition, surgical shock, delayed shock, traumatic neurasthenia, death following trivial injuries, and apathetic death "without apparent reason."

LOCAL ANESTHESIA.

The importance of local anesthesia has never been appreciated in America. In a measure this is due to American hurry, but more probably to inexperience in the method and a deep rooted fear of poisoning traceable to the days of strong cocain solutions. The strong cocain solutions are equally or more dangerous than general anesthesia, while the weak solutions are the safest of all methods of anesthesia. Reclus says cocain, when properly and prudently administered is the least treacherous of all anesthetics. He writes that he has employed it in over ten thousand operations during the past twenty-three years, not only without a death but without any disturbance of the "equilbre physiologic" of the patient. He further states that the reason dentists have frequent mishaps with cocain is because of their faulty technic: 1. They use too strong solutions. 2. They inject the cocain with the patient sitting up. 3. They permit their patient to stand up, walk around, and go away too soon after operation. This fully accounts for the frequent occurrence of nausea, fainting and vertigo in dental practice. Reclus reports over 70,000 extractions and operations on the teeth according to his technique without a single mishap.

Following the discovery of the anesthetic properties of cocain by Karl Koller, Halsted of Baltimore was the first surgeon to emphasize the advantages of intradermal injection, 1844; following Halsted came Leonard Corning of New York, who was first to appreciate the importance of using the dilute solutions. Corning's pioneer studies in local anesthesia did more than those of any other surgeon to place local anesthesia on an established foundation as a rational method of anesthesia.

The local anesthetics of choice are cocain and novocain. The cocain solutions employed by the men who use local anesthesia most range from 1-5 to 1-15 per cent.; the

novocain solutions are usually employed three or four times stronger, as the anesthesia of novocain is slower in appearing and more fleeting in its effect. For prolonged operations under cocaine and all operations with novocain the addition of five minims of adrenalin chloride to each ounce of solution is to be recommended to prolong the anesthesia until completion of operation.

Water has occasionally been recommended as a local anesthetic as a substitute for cocain. While it is true that it produces a temporary anesthesia if sufficient amount is injected to paralyze the nerves from pressure, its use is impractical and not recommended by the expert local anesthetist; as soon as the water is absorbed and the pressure removed the sensibility to pain returns; this is the "anesthesia dolorosa" of Liebrich, and lead Schleich to suggest the use of normal saline solution instead of plain water.

THE TREATMENT OF PULMONARY TUBERCULOSIS.

There are many things to be considered in the treatment of pulmonary tuberculosis, and in a journal article only very few can be mentioned. One writer says that patients with pulmonary tuberculosis should weigh once a week when under treatment, so they can see the gain and thus have proof that they are improving. I will state here that if the patient is not improving, it would be best not to have him weigh, as he may become discouraged if he saw he was going down all the time.

I have never heard much said about vomiting in pulmonary tuberculosis. I find that by coughing the patient vomits his food, and in this way starves to death by degrees. The cough which causes this vomiting and thus brings about starvation should, in my opinion, receive more attention. Some authorities strongly advise against smoking in pulmonary tuberculosis, and this advice is well worthy of consideration.

Drinking water is very important in pulmonary tuberculosis. We find that in most cases the patients do not drink enough water. The value of drinking plenty of water cannot be over-estimated. There is a very small book "How to be Plump," by F. C. Duncan, M.D., which gives the best information that we know of on this subject.

One writer says "The tubercular individual requires calcium and tissue degeneration, and breaking down is stayed by pushing lime in some form." Possibly this is why the hypophosphites are used so often. Glycerine is extensively used in Germany in wasting diseases, especially in tuberculosis.

The following is recommended as a tissue builder in tuberculosis and wasting diseases:

℞ Syr. hypophos. comp.
Glycerin aa 3v

M. Sig.: Dose one to two drachms four times a day.

One writer says "The demand for an excess of fat is in no disease more pronounced than in tuberculosis, since it manifests itself by the wasting of subcutaneous fat." Again he says, "Did you ever see a tubercular patient die while gaining weight? In pulmonary tuberculosis the most important consideration is the establishment of upgrade metabolism and the maintenance of the nutritive processes at the highest possible point."

Cod liver oil is one of the old remedies in pulmonary tuberculosis, but the odor and disagreeing with the stomach has been a great drawback.

Dr. Thos. Bassett Keyes, of Chicago, uses olive oil hypodermically in tuberculosis and claims excellent results. He uses from half an ounce to an ounce once a day.

Dr. C. A. S. Sims, of Kansas City, Mo., author of "Talks on Chronic Diseases," says;

"It is my opinion that the X-ray has no value in pulmonary tuberculosis. It is all right for lupus where the T. B. is superficial. I believe the high frequeucy through a high vacuum glass electrode which shows a light green color will do some good.

In the March, 1906, Wisconsin Medical Recorder, Dr. G. G. Burdock says the following when speaking of the X-rays: "I have seen cases of local tuberculosis recover in my laboratory so promptly as to seriously question the diagnosis." He further states that in pulmonary tuberculosis the X-ray gives good results.

In the April, 1910, Wisconsin Medical Recorder, Dr. H. O. Wells says: "I have cured a number of tubercular glands, joints, and bones, and have cured a number of cases of pulmonary tuberculosis in which I believe the X-ray played the most important part in the treatment."

In an article on "Electricity in Tuberculosis," by Dr. N. M. Eberhart, in the December, 1912, Medical Brief, he says in speaking of the X-ray, "Its use in pulmonary tuberculosis has been practically discontinued, as other measures, less dangerous, have proved more efficient."

J. A. B.

The sixteenth annual session of the Tri-State Medical Association of the Carolinas and Virginia (North Carolina, South Caro-

lina and Virginia) will be held in Wilmington, N. C., February 18 and 19, 1914, under the Presidency of Dr. Southgate Leigh, of Norfolk, Va. Dr. Rolfe E. Hughes, of Laurens, S. C., is Secretary and is busily engaged in arranging an attractive programme, while the Committee of Arrangements under the capable and indefatiguable lead of Dr. Chas. T. Harper, of Wilmington, are carefully looking in the direction of seeing that all attending are pleasantly and comfortably cared for.

Editorial News Items.

Surgeon H. R. Carter, U. S. P. H. & M. H. Service, who spent two months in intimate study of malarial conditions and prevalence in Eastern North Carolina during the summer just passed has had published by the Washington authorities an exhaustive report on the disease as seen in Eastern North Carolina. The report is exhaustive and a valuable contribution to the literature. Some of the noteworthy findings of the report are as follows:

Malaria in all its forms is growing less virulent, and is noticeably less prevalent than when I formerly studied this section five years ago. (In this finding the profession agree).

Better sanitation in general throughout the section, in part, and the lowered cost of quinine accounts for this.

The type of malaria most frequently seen is of mild tertian, though æstivo-autumnal is also seen often.

The much shorter period of activity of the anopheles as compared with more tropical climes encourages the probability of eventually eliminating the disease.

As a producer of anæmia (which latter condition is frequently met) malaria ranks next to, but below, hook-worm, especially in the young.

Adults, to a very large degree, though by no means in the whole, attain partial immunity to malaria.

Top minnows are regarded as the most valuable allies in the anti-malarial campaign, no larvæ being found where these small fish have access to all parts of a stream.

Cotton mill waste, tar from gas plants, and waste from other manufacturing enterprises also poison larvæ.

A fringe of negro homes between the marshes and the white residential district is helpful in diminishing the development of malaria.

All ditches made in Eastern Carolina should have sloping sides, thus ensuring their potency and the ability of minnows to reach all parts of the exposed water.

Drainage whenever possible, and the covering of exposed stagnant water with oil when practicable, and the careful screening of all houses with No. 16 screens, is advised.

Finally, the more general use of daily doses of quinine in portions not sufficient to unpleasantly affect the head, but enough to impress the system, is of the utmost importance, and deserving of more extended practice throughout Eastern Carolina, and the South in general.

The Johnston County, Medical Society of N.C., elected the following officers for 1914: President, Dr. Thel Hooks, Smithfield; Secretary, Dr. L. J. Wharton, Smithfield.

The 18th annual banquet of the Buncombe County Medical Society was held at the Battery Park Hotel in Asheville, N. C., on December 15, 1913. Covers were laid for 80 and the occasion was one of delight and charm. The principal speaker of the evening was Dr. James Madison Parrott, of Kinston, N. C., the erudite President of the State Medical Society, and his address, a notable plea for the more active participation of the average physician in public health work, elegant in diction, graceful and forceful in delivery, was replete with helpful suggestion, and listened to with much interest. Addresses were also made by several others.

The Buncombe County Medical Society elected the following officers: President, Dr. Paul Ringer; Vice-President, Dr. Eugene B. Glenn; Secretary-Treasurer, Dr. G. S. Tennent; Delegates, Drs. A. W. Calloway, C. V. Reynolds, and E. R. Morris.

Dr. Arthur R. Guerrard, of Flat Rock, N. C., has removed to Asheville, N. C.

Dr. R. L. Pittman, of Fayetteville, N. C., has returned home after an extended postgraduate course. He will be associated with Dr. J. F. Highsmith in the Highsmith Hospital, having charge of the laboratory and electrical work of the institution.

Dr. John W. Long, of Greensboro, N. C., was elected President of the Southern Surgical and Gynæcological Association at the recent session in New Orleans. The annual meeting of 1914 will be held in December at Asheville, N. C.

Reports from the State Sanitarium for Tuberculosis at Montrose, N. C., opened by the State Board of Health December 1st, 1913, indicate its space all filled.

At the recent session of the South Carolina State Board of Medical Examiners the following physicians were licensed to practice medicine, 18 passing out of 44 applicants:

D. A. Barrow, Roxbury, Mass.; O. L. Bruorton, Petersfield; W. D. Chappelle, Jr., Columbia; L. M. Daniels, Columbia; R. B. Durham, Perry; R. F. Flowe, Kannapolis, N. C.; Samuel Friedheim, Rock Hill; B. H. Henry, Clinton; Edmund Johnson, Jr., Abbeville; A. T. King, Johnston; A. F. Mahoney, Ferguson; R. T. McCraw, Oxford, Ala.; T. E. Miller, Jr., Charleston; W. C. Myers. Meldrim, Ga.; A. H. Neill, Clover; C. L. Scott, Clio; B. S. Sharp, Seneca; T. C. Sharp, Charlotte, N. C.; J. Dr Smyser, Florence.

The North Carolina State Supreme Court has just sustained The City of Asheville vs. H. L. Nettles, dairyman, the Asheville Milk Ordinance prescribing a license tax of $1.00 per cow and specifying standard sanitation that must be observed in managing dairies and marketing milk. The court opinion is written by the Chief Justice and sustains the right of the legislature to empower a city to enforce ordinances such as Asheville has adopted requiring the most careful and elaborate sanitary precautions known to modern science in conducting dairies offering dairy products for sale in the city, regardless of whether the dairy be located within or without the municipal corporation boundaries. The decision of the higher court forges another link in the chain of splendid modern sanitation Asheville has thrown about herself and environments.

The Guilford County (N. C.) Medical Society at the annual meeting December 5, elected the following officers for 1914:

President, Dr. John A. Williams; Vice-President, Dr. C. W. Moseley; Secretary-Treasurer, Dr. Parran Jarboe. Censors: Drs. D. A. Stanton, W. P. Beall, Edmund Harrison. Delegates State Medical Society: Drs. J. T. J. Battle, J. W. Long, and W. P. Beall, all of Greensboro, save Dr. Stanton, of High Point.

Dr. J. W. Kornegay, of Mt. Olive, N. C , a well known practitioner of many years standing, was stricken with apoplexy while visiting in Goldsboro, N. C., December 8th, and his condition is reported critical.

At the annual session of the North Carolina State Farmer's Union in Shelby, N. C., Dec. 17-19, 1913, Dr. Henry Q. Alexander, of Mecklenburg county, N. C., was re-elected President, and Dr. J. M. Templeton, of Wake county, Vice-President.

Will the American medical profession eventually be placed upon a socialistic basis is a question that can but confront the doctor who thinks for himself at times? In Currituck county, in Haywood county, and in other counties, doubtless, in North Carolina, there are communities and organizations that collect a small monthly sum from their citizens or members and pay the community physician a stipulated sum to attend everybody. While the plan certainly ensures the payment of the doctor's income without effort in collecting, and likewise ensures that all may have professional attention at all times, yet it is doubtful if any physician is ever at his best in the performance of this kind of contract work, and it may be questioned if the real interests of both profession and people are not hindered rather than helped by such communistic arrangements.

The Laurens County (S. C.) Medical Society elected the following officers for 1914: President, Dr. G. F. Klugh, Cross Hill; Vice-President, Dr. Isadore Schayer, Laurens; Secretary, Dr. J. D. Austin, Clinton. Censors: Drs. Rolfe E. Hughes, A. J. Christopher, and H. W. Bailey.

North Carolina Society for Mental Hygiene Founded.

North Carolina has taken the lead in the mental hygiene movement in the South by establishing the first society for mental hygiene in the Southland. It was through the initiative and untiring efforts of Dr. Albert Anderson, of Raleigh, N. C., that she was able to do this. Much interest was manifested at the Mental Hygiene Conference and Exhibit in Raleigh, and soon after its close an informal meeting was called together by Dr. Anderson for the purpose of organizing a society of this character. More than twenty representative citizens attended this meeting so hastily called to order. It was decided that a society be organized and known as the North Carolina Society for Mental Hygiene; that the superintendents of the three State hospitals, Dr. Anderson, of Raleigh, Dr. Faison, of Goldsboro, and Dr. McCampbell, of Morganton, should serve as a temporary executive committee; that Dr. Anderson be appointed temporary secretary; and that the executive committee appoint the first twenty-five members of the board of directors which, when complete, will number sixty. All interested in this great work should send their names to Dr. Anderson.

Dr. Harlan Shoemaker.

We are sorry to be informed that Dr. Shoemaker, formerly of Shelby, N. C.,

contemplates opening an office in Los Angeles, California, for the practice of his specialty, surgery. Dr. Shoemaker was not only, while in this section of the State, a very polished and accomplished gentleman but one of our most distinguished surgeons. We hope that he can be persuaded to come back to Shelby and resume his practice there.

After hearing considerable argument Judge C. M. Cooke of the Superior Court, Wake county, N. C., decided recently that Dr. Albert Anderson, Superintendent State Hospital for Insane at Raleigh, N. C., must recognize R. A. Salisbury, of Martin county, N. C., as a member of the Board of Directors of the State Hospital for the Insane at Raleigh, and also ordered Dr. Anderson to pay the said Director his expenses for attending the last session of the Board of Directors. It will be recalled that a vacancy occurring in the Board by the failure of a regularly appointed and confirmed Director to complete his official term, it was filled by Gov. Kitchen in appointing R. A. Salisbury to complete the unexpired term. Gov. Kitchen's successor, Gov. Craig, assumed the position that the appointee of the former governor could only serve until the next session of the legislature following his appointment when it should be perfected by the Senate confirming him, and designated another for the position who was promptly confirmed by the Senate. Then Gov. Kitchen's appointee, R. A. Salisbury, attended the sitting of the Directors contending his right to complete the unexpired term without Senate confirmation, and demanded of the Superintendent his pay therefor, failing to receive which action was brought with the above result. Dr. Anderson will appeal the case to the Supreme Court.

The Fourth Annual Meeting of the Seventh District Medical Society was called to order by Vice-President Jno. B. Wright in the absence of Dr. J. M. Covington, the President, who was kept away by sickness in his family. Dr. Wright, acting also for the Committee on Arrangements, introduced Capt. C. E. Childs, Mayor of Lincolnton, who welcomed the Society in behalf of the town of Lincolnton in a few well chosen words. He was followed by Dr. H. M. Abernethy, of Denver, in behalf of the Lincoln County Medical Society, who reviewed the splendid history of Lincoln county and welcomed the Society to take part in its achievements. In the absence of Dr. Oren Moore, of Charlotte, Dr. John Hill Tucker made the response to these addresses. The regular program was then begun and followed with very few variations. There were a few outstanding features of this meeting. The first was the splendid discussions that followed each paper, showing that all of the men were wide awake and that they were trying to get much benefit from the meeting.

The second feature was the papers illustrated by stereoptican views and moving pictures, given by Dr. Squires and Dr. Munroe, and the X-Ray demonstration by Dr. W. D. Witherbee, of Charlotte.

Following the evening meeting the Society was entertained at a splendid banquet by the Lincoln County Society and after the Tuesday meeting at a reception given at Fassifern.

The following officers were elected for the ensuing year: Dr. J. B. Wright, of Lincolnton, President: Dr. H. D. Stewart, of Monroe, Vice-President; Dr. R. H. Lafferty, of Charlotte, Secretary. Concord was chosen as the place for the next meeting. It was unanimously decided to hold the Clinical Conference in Charlotte in March.

After adopting the following resolution the meeting adjourned:

Be it Resolved, That the Seventh District Medical Society desires to put on record its appreciation of the royal entertainment they have received at the hands of the medical profession of Lincoln county.

That the meeting has not only been pleasant from a social standpoint but that the character of the papers and discussions has been of such a high grade as to make this one of the most successful meetings in the history of the society.

ROBT. H. LAFFERTY, M. D. Sec'ty.

The Tri-State Medical Association of the Carolinas and Virginia.

The following letter has been received from Dr. Southgate Leigh, of Norfolk, Va., who is president of this association:

"Our next meeting will be held in Wilmington, N. C., February 18th and 19th.

Your president has just returned from a visit to that city. Full arrangements will be made for the meeting. The local profession and public will extend us a cordial welcome. Hotel accommodations and a good hall will be provided. Wilmington is of easy access and is a very attractive city.

Every indication points to a most successful and enjoyable meeting. We expect several distinguished guests, a full and attractive program and a large attendance.

Be sure and make your plans to attend.

The Tri-State is a strong and useful organization, and is steadily increasing in size and importance.

Every progressive man of the three States

should belong. Invite your colleagues to join. Send in their applications promptly."

It gives the editor of the Journal pleasure to publish the following letter:

To the Editor,
Charlotte Medical Journal,
Charlotte, N. C.

Dear Sir:

In your editorial upon the School for the Feeble-Minded at Kinston, N. C., you have gotten your history a little mixed. Isn't it better that the error be corrected and history set straight?

You used these words: "In the Legislature some three years ago State Senator Dr. A. A. Kent, of Lenoir, and representative in the House Dr. J. A. Gordon, of Jamestown, N. C., were most indefatigueable in their efforts for the initial State appropriation." What you said in reference to Dr. Kent is correct, with the exception that he was a representative instead of a Senator. Dr. Gordon was not a member of either house at the session of 1911 when the bill was passed. Dr. R. N. Cartwright,of Fairfield, Hyde county, was the Senator who introduced it in the Senate and worked for its passage every day until the bill was enacted into law. Only nine votes were cast against it in the Senate, passing that body 40 to 9. In the House, Hon. W. A. Thompson, of Aurora, representative from Beaufort county, introduced the bill, and did more work for the passage of the bill than any other member of that body, passing it by an overwhelming majority, there being only 15 votes against the bill; in fact, it ought to be known as the Cartwright-Thompson bill.

Very truly yours,
J. F. LATHAM,
Representative from Beaufort County,
Session of 1911.

Georgia Surgeons' Club.

Next meeting New Orleans, Feb. 27-28, '14.

OFFICERS.

E. C. Davis, M.D., Atlanta, Ga., President.

Thos. J. McArthur, M.D., Cordele, Ga., Vice President.

R. M. Harbin, M.D., Rome, Ga., Secretary-Treasurer.

EXECUTIVE COMMITTEE.

W. S. Goldsmith, M.D., Atlanta, Ga., Chairman.

G. R. White, M.D., Savannah, Ga.

W. W. Battey, Jr., Augusta, Ga.

FOREWORD.

The purpose of the Georgia Surgeons' Club is to arrange in advance, through an Executive Committee, with the heads of the various clinics a program that will occupy the entire time allotted so that a short period of clinical study of surgery may be of value and furnish complete information as to transportation, hotels, etc., and the advantages thus offered will tempt surgeons whose limited time would otherwise forego clinical study tours.

It goes without saying that every surgical master would stand ready to extend courtesies to a body of earnest men if he has been duly apprised in a formal way.

BY-LAWS GEORGIA SURGEONS' CLUB.

Article I.

Name: Georgia Surgeons' Club.

Article II.

Object: To raise the standard of surgery and hospitals in Georgia and furnish facilities for the study of clinical surgery.

Article III.

Officers: Sec. 1. President, Vice-President, Secretary-Treasurer, and an Executive Committee of three, the officers being ex-officio members of this committee, all of them elected biennially except the Secretary-Treasurer, whose term of office shall be four years, and shall serve until their successors are elected.

Sec. 2. The executive powers of the Club shall be vested in the Executive Committee, subject to overrulement by a majority vote of the members at each regular meeting.

Article IV.

Members; Sec. 1. The qualifications for membership shall be membership in the Medical Association of Georgia.

Sec. 2. Honorary members, without voting privileges, may be elected from other State and countries and from the Army, Navy and Marine Hospital Services by the Executive Committee.

Article V.

Meetings: Meetings of the Club shall be held in such cities as have suitable hospital facilities and at such time and place as may be determined by the Executive Committee, and any meeting after thirty days' notice by the Secretary and authorized by the Executive Committee shall constitute a regular meeting.

Article VI.

Fees: At each meeting of the Club the members in attendance only, shall be assessed such an amount as becomes necessary to meet current expenses.

County Physicians Re-Elect Officers.

The Rutherford County Medical Society met in annual session recently at the Southern Hotel, Rutherfordton. Several clinical

cases were before the Society and these were followed by a discussion of vital statistics. Dr. Henry Norris read an able paper on "Duodenal Ulcer." Dr. J. B. Thompson, of Cliffdale, was elected president of the Society, Dr. M. H. Biggs, vice-president, and Dr. W. C. Bostic was re-elected secretary and treasurer. The Society was entertained at an elegant dinner at the Southern by the Rutherfordton doctors.

The Gaston County Medical Society.

At its annual meeting December 12th, the Gaston County Medical Society elected officers for the ensuing year as follows: President, Dr. H. F. Glenn, of Gastonia; first vice president, Dr. D. A. Garrison, of Gastonia; second vice president, Dr. C. H. Pugh, of Stanley; secretary and treasurer, Dr. Bessie B. Pruett, of Dallas; delegate to State Society, Dr. T. C Quickle, of Gastonia; alternate, Dr. R. E. Rhyne, of Mount Holy.

The South Carolina State Medical Association on call of the President, Dr. Wm. Weston, of Columbia, S. C., met in special session in Columbia in December and completed plans for securing from the incoming legislature added appropriations for the further development of the work of the State Board of Health and the improvement of the medical side of the State institutions. Committees were appointed and a vigorous effort will be made to accomplish the highly proper and praiseworthy plans made by the Society.

Meningitis in South Carolina.

In the report of epidemic cerebrospinal meningitis, Dr. Hayne, State health officer, calls attention to the fact that there has been no epidemic of this disease in the State during the past year, though there were twelve cases reported from Lexington county, seven from Richland county and five from Chester county.

There were 49 cases reported in all, and Dr. Hayne made it his personal business to investigate every case, und in a number of them to administer treatment. Prompt action in administering Flexner's serum, according to Dr. Hayne, will cure a vast majority of the cases, whereas without treatment the death rate is very large, being higher than any other contagious disease.

The following counties reported cases of this disease: Aiken 3, Anderson 1, Bamberg 1, Calhoun 1, Chester 5, Darlington 2, Florence 1, Greenwood 1, Kershaw 3, Laurens 2, Lexington 10, Marlboro 1, Newberry 1, Oconee 1, Pickens 2, Richland 7, Spartanburg 3, Sumter 1 and York 2.

Dr. Hayne in his report said: "We hope the present legislature will provide means for the further distribution of this life-saving remedy—Flexner's serum—and hope that it may not be necessary to use any large quantity, but we must have it on hand in case of emergency, for it is a remedy that is not easily obtained in country districts and the State Board of Health is always called upon to furnish it when a case occurs. We again print rules to be adopted by local Boards of Health in cases af epidemic cerebrospinal meningitis: (1) Quarantine the house, keeping in all who have been in contact with the patient; (2) the patient and nurse must be isolated in one room of the house; (3) all discharges of the patient, and everything used by the patient and attendants, should be thoroughly disinfected; also, after the termination of the case the room in which the patient was treated and everything in it; (4) those who have come in contact with the disease must be kept under quarantine for three weeks, their noses and throats sprayed with an antiseptic solution during this period. Notify the State Health Officer at Columbia immediately upon the appearance of the case."

Dr. Robert H. Lafferty and Miss Edith K. Fry were married recently in the First Presbyterian Church of Charlotte. Mrs. Lafferty is a native of Canton, Ohio, and came to Charlotte two years ago to become general secretary of the local Young Women's Christian Association. Dr. Lafferty is a native of Mecklenburg county. He graduated at the North Carolina Medical College in 1906, and later pursued his studies at the University of Chicago. For a number of years he has been connected with the North Carolina Medical College and is well known in Charlotte. Dr. and Mrs. Lafferty will make their home in this city much to the delight of their friends.

Dr. M. C. Horton, a prominent physician of Raleigh, N. C., and Miss Theodosia Liipfert, of Winston, N. C., were married quite recently. Mrs. Horton is the daughter of Mr. and Mrs. F. J. Liipfert, of Winston. Dr. Horton is a graduate of the University College of Medicine, Richmond, Va., and has done post-graduate work in many of the Eye and Ear Hospitals. He has for some time been practicing in Raleigh where he and Mrs. Horton will make their home.

Married, in the Edna Long Memorial Church at Roxboro, N. C., on December 13, 1913, Dr. B. E. Love of Roxboro to Miss Julia Cole. The groom is a leading physician of Roxboro, and the bride one of

Carolina's fairest daughters. They were the happy recipients of many beautiful and valuable presents from friends in both the Carolinas and Virginia.

The death at Charleston, S. C., on December 15, 1913, of Dr. Francis Le Jau Parker, of that city, removes one of the most widely known and justly celebrated medical gentlemen of a community noteworthy for its high grade physicians and surgeons. Born of distinguished parentage in 1836, he was graduated at the Medical College of South Carolina at Charleston in 1858, and a few years later he entered the service of the Confederate States Army, where he rose to rank as one of the most efficient medical officers. After the war between the States Dr. Parker immediately became known as one of Charleston's leading medical men, and right well he served his city as physician, and his profession and State as Dean of the Charleston Medical College (his alma mater) for many years. As illustrating his prestige and influence with the young men of his section, it may be remarked that of the some 90 white male physicians of Charleston at this time, all save nine are alumni of the local college of medicine at Charleston. And it is properly worthy of mention in this connection, in both point of scientific attainments and practical accomplishment in the medical and surgical treatment of human disease, that the profession of Charleston, long regarded as representative of the best in American medicine, still maintains the reputation its predecessors wore in the early colonial days of being made up of cultured, scholarly, scientific gentlemen, despite the fact that nearly all received their medical from a small medical college in a Southern city.

BOOK NOTICES.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pædiatrics, Obstetrics, Gynecology, Orthopædics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A.M., M.D., with the collaboration of John A. Witherspoon, M.D., Sir Wm. Osler, M.D., A. McPhedran, M.D., Frank Billings, M.D., Chas. H. Mayo, M.D., Thos. H. Rotch, M.D., John G. Clark, M.D., James J. Walsh, M.D., J. W. Ballantyne, M.D., John Harold, M.D., and Richard Kretz, M.D. With regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Volume IV. Twenty-third series, 1913. Philadelphia and London; J. B. Lippincott Company. Price $2.00.

This volume of International Clinics is quite interesting and valuable. The several papers are classed under five main heads, namely; Diagnosis and Treatment, Medicine, Neurology, Surgery, and Eugenics. There are ten colored plates and any number of diagrams and figures. These of course add much to the value of the book.

Genito Urinary Diseases and Syphilis; By Edgar G. Ballenger, M.D., Adjunct Clinical Professor of Genito-Urinary Diseases, Atlanta Medical College; Editor Journal-Record of Medicine; Urologist to Westley Memorial Hospital; Genito-Urinary Surgeon to Davis-Fisher Sanatorium; Urologist to Hospital for Nervous Diseases, etc., Atlanta, Ga., assisted by Omar F. Elder, M.D. The Wassermann Reaction. By Edgar Paullin, M.D. Second Edition, Revised. 527 pages, with 109 illustrations and 5 colored plates. Price $5.00, net, E. W. Allen & Co., Atlanta, Ga.

Such rapid advances have been made in the study of genito-urinary diseases that it has been necessary to rewrite much of this book. In this second edition are included most of the notable improvements. Among them being a more satisfactory treatment of gonorrhœa; vaccine therapy; Rountree and Geraghty's test for functional activity; pyelography; the Wassermann reaction and luetin test; the cultivation of the spirochæta pallida; the use of the dark field illumination in the demonstration of the spirochæta pallida; the inoculation of animals with syphilis and the discovery of salvarsan and neosalvarsan. The rare affections and unusual operations are dealt with very briefly while much space is given to a description of the commoner diseases. The technic and interpretation of the Wassermann and luetin tests are given in full. A summary of each chapter has been added to aid the student in his study and review for examinations and quizzes.

Fundamentals of Farming and Farm Life. By Edwin Jackson Kyle, B.S., B.S.A., M.S.A., Professor of Horticulture and Dean of the School of Agriculture, The Agricultural and Mechanical College of Texas, and Alexander Caswell Ellis,

A.B., Ph.D., Professor of the Philosophy of Education and Director of the Department of Extension, The University of Texas. Illustrated. Charles Scribner's Sons, New York, Chicago, Boston.

One of the valuable features in this book is that it enables the school to give to the farmer girl almost the same preparation for her life work on the farm as is now, and has been for some time, given to the farmer boy, The book is especially intended for school use and in order to develop the powers of observation, exercise the reason, and connect the lessons with the daily life and home needs of the pupils, lists of suggestive questions, exercises, and problems are provided for each subject.

The volume is quite appropriately bound, well indexed and profusely illustrated. It gives us a great deal of pleasure to recommend it.

The Surgical Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume II. Number VI. (December). Octavo of 186 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Published Bi-Monthly. Price per year: Paper, $8.00. Cloth, $12.00.

This volume is quite interesting and valuable. The subjects that it treats of are: Tuberculosis of the Lung; Bone Cyst of the Radius; Pyonephrosis; Drainage; Exostosis of Radius and Ulna; Ununited Fracture of the Radius, Previously Plated; Ankylosis of Elbow; Laminectomy for Tuberculoma of Spinal Column, with Compression of Spinal Cord; Kyphosis and Lateral Curvature; Motor Paralysis; Subcutaneous Abscess Following Tuberculosis of the Spine; Undescended Testicle in Inguinal Canal; Cholelithiasis.

Diseases of the Kidneys and Nervous System. By A. S. Blackwood, B.S., M.D., Professor of Clinical Medicine in the Hahnemann Medical College, Chicago; Author of "A Manual of Materia Medica, Therapeutics and Pharmacology," "Diseases of the Heart," "Diseases of the Lungs," "The Food Tract, Its Ailments and Diseases of the Peritoneum," and "Contagious and Constitutional Diseases." 346 pages. Cloth, $1.50. Postage, 9 cents. Philadelphia: Roericke & Tafel. 1913.

This volume and the members of this series preceding it are of especial value to the student and general practitioner, not to the specialist. We have the facts presented as the author observed them in his clinics, hospital and private practice. As a result only the verified and practical have been incorporated. Special attention has been devoted to the subject of diagnosis, differential diagnosis, hygienic and dietetic treatment, as well as the selection of the indicated remedy.

Materia Medica, Pharmacology, Therapeutics and Prescription Writing. For Students and Practitioners. By Walter A. Bastedo, Ph.G., M.D., Associate in Pharmacology and Therapeutics at Columbia University. Octavo of 602 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, $3.50 net.

Throughout this volume great emphasis has been placed upon the value of research, both in the laboratory and at the bedside. Digitalis is discussed at greater length than any other drug. This is a very important drug and as there have been recently great changes in our knowledge of cardiac physiology and therapeutics this part of the book will prove quite interesting to all doctors.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia. Assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia. December 1, 1913. Lea & Febiger, Philadelphia and New York, 1913.

This is the fourth volume of Progressive Medicine of the 1913 series. The table of contents is as follows: Diseases of the Digestive Tract and Allied Organs, by Edward H. Goodman, M.D.; Diseases of the Kidneys, by John Rose Bradford, M.D.; Genito-Urinary Diseases, by Charles W. Bonney, M.D.; Surgery of the Extremities, Shock, Anesthesia, Infections, Fractures and Dislocations, and Tumors, by Joseph C. Bloodgood, M.D.; Practical Therapeutic Referendum, by H. R. M. Landis, M.D.

Text-Book of Physiology. For Medical Students and Physicians. By William H. Howell, Ph.D., M.D., Professor of Physiology, Johns Hopkins University, Baltimore. Fifth Edition, Thoroughly Revised. Octavo of 1020 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, $4.00 net; Half Morocco, $5.50.

Since the publication of the fourth edition important changes have occurred in physiological views, particularly in regard to the difficult subject of metabolism. The active work going on in physiology and physiological chemistry has added greatly to our knowledge of the details of inter-

mediary metabolism in the body, and in some respects has brought into question what before were considered established theories or principles in regard to the processes of nutrition. In this edition the author presents all the latest views upon the subject of physiology and the significant advances in it. It is in every way an up-to-date volume upon this subject.

Dorland's American Illustrated Medical Dictionary. A new and complete dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology, and kindred branches; with new and elaborate tables. Seventh Revised Rdition. Edited by W. A. Newman Dorland, M.D. Large octavo of 1107 pages, with 331 illustrations, 119 in colors. Containing over 6,000 more terms than the previous edition. Philadelphia and London: W. B. Saunders Company, 1913. Flexible leather, $4.50 net; thumb indexed, $5. 0 net.

Such rapid advances have been made in all the sciences, especially in the fields of serology, physiology, pathologic chemistry, and experimental medicine that it has been necessary to revise the dictionary. Investigations in the laboratory have led to the publication of innumerable reactions and tests to which the names of the recorders have been attached. The clinician and surgeon have also been active and with the result that literatire shows a vast array of proper names applied to symptoms of disease, methods of treatment, and surgical operations. The most important of these are fully described in this new edition.

The entire work has beeu carefully revised, yet the special features of the sixth edition have been retained and throughout the volume the needs of the student and practitioner always kept in mind. The result is a handy, complete and convenient dictionary.

The volume is beautifully and appropriately bound.

Principles of Surgery. By W. A. Bryan, A.M., M.D., Professor of Surgery and Clinical Surgery at Vanderbilt University, Nashville, Tennessee. Octavo of 677 pages with 224 original illustrations. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, $4.00 net.

This volume puts the fundamental facts before the student and the physician in a simple and logical way, thus laying a foundation upon which an intelligent understanding of the immense details of practical work may be built. It presents the facts upon wnich surgical diagnosis and treatment rest, and at the same time coveis elemental teachings which concern every branch of medical practice.

This volume, like others prtnted by this company, is in a good substantial binding. It has been very carefully indexed and many of the illustrations are excellent.

A Text-Book of the Practice of Medicine. By James M. Anders, M.D., Ph.D., LL.D., Professor of Medicine and Clinical Medicine, Medico-Chirurgical College, Philadelphia. Eleventh Edition, Thoroughly Revised. Octavo of 1325 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, $5.50 net; Half Morocco, $7.00 net.

In this volume, the eleventh edition, we have presented to us the majority of modern methods of diagnosis of medical complaints with sufficient detail. Among the more important additions to the work may be mentioned: McPhedran's sign of peritonitis in typhoid fever; Burke's reflex sign in typhoid fever; Prendergast's test in typhoid fever, phlebotomy and transfusion in hemorrhage of typhoid fever, hot-air inhalations in diphtheria; Lee's sign in acute articular rheumatism; Weil's test in syphilis; Schepelmann's sign in acute plastic pleurisy; Karell milk-cure in valvular heart disease; McCaskey's method of treating gastroptosis, and Bastedo's test in appendicitis. Quite a number of new subjects have been discussed.

This volume is one that will prove quite valuable to the practitioner and the student. It gives us pleasure to give it this short review notice in the Journal.

History of Medicine, with Medical Chronocology, Bibliographic Data, and Test Questions. By Fieiding H. Garrison, A.B., M.D,, Principal Assistant Librarian, Surgeon General's Office, Washington, D. C., Editor of the "Index Medicus." Octavo of 763 pages, many portraits." Philadelphia and London. W. B. Saunders Company, 1913. Cloth, $6.00 net; Half Morocco, $7 50 net.

The medical student and busy practitioner will find in this book a good friend. It gives a definite outline of the history of medicine and at the same time sets forth a large number of important facts which will prove of value in professional work or medical culture.

The style of the author is clear and concise. He conveys his information in such a way that the student is capable of grasping it and keeping it in his mind.

The publishers and author have spared no pains or expense to make the volume as accurate and complete as possible.

The Treatment of Rheumatic Infections. This is a book of about 134 pages published by Parke, Davis & Company, Detroit, Michigan.

An examination of the book convinces the reviewer that it contains a great deal of valuable information, especially the literature touching upon Rheumatic Infections.

This little book, which is attractively bound in cloth, will be sent to any doctor, postpaid, on request.

What Heart Patients Should Know and Do. A small volume of about 200 pages. By Wm. Francis Honan, M.D., New York. Dodd, Mead & Co., Publishers.

The author of this little volume has been very painstaking in compiling the subject matter which it contains. He has gone into details in a most interesting and practical way concerning what patients should know about themselves. The book, in an impressive manner, tells how the physician should instruct his heart patients, and explains what it is important for the patient to know and do in a preventive way, as well as how to care for themselves in emergencies.

It embodies a course of instruction that is very valuable to both physician and patient and enables them to prevent much of the suffering and dangers attendant upon the various ailments to which the heart is subject. It is the duty of every conscientious physician to instruct their patients how to care for themselves, and this book, written along these lines, should appeal strongly to them.

The White Linen Nurse. Century Co., New York, $1.00, postage 7c.

Did you read that pretty little story, "Molly Make-Believe," published a while ago? Well, if you didn't you have missed one of the most attractive tales which has appeared in a long time. Aad The White Linen Nurse, by the same author, while slightly different in type, is one which should appeal much to the doctor who reads it; you will enjoy the rough, busy Senior Surgeon, his funny little daughter, the charming, resourceful and somewhat enigmatic nurse, and also the rather unconventional love story which crops up unexpectedly.

How to Take Care of the Baby. By Dr. Francis Tweddell. The Bobbs-Merrill Co., Publishers.

The medical man and the obstetrician will welcome Dr. Tweddell's revised and enlarged edition of "How to Take Care of the Baby."

This is just the book to put in the hands of the mother, for its simple and direct language makes it intelligible reading for those unacquainted with technical words and phrases.

Nurses who have, at any time, the care of babies should have this little manual with them for reference, for Dr. Tweddell has so written the book that it is well adapted for text-book use.

The relation of the mother to the physician is apparent throughout. The ethical note is one of the most pleasing features of the book.

The "Better Way" In a Century's Test.

Perhaps the very best argument of all for the maintenance of peace is to be found in the history of its practical results. Where nations have had differences that threaten war, and have found it impossible to settle those differences by other means, they are almost certain to be able to look back with satisfaction upon such experiences. Herein lies the value to the world of the plans for advertising and celebrating a rounded century of peace between the Governments of Great Britain and the United States. It is true that many ties have bound the two countries together, but there have also been many causes of clash and friction, and several points of real danger. And yet these emergencies have been met, and peace has become a fixed condition. The War of 1812 with Great Britain was ended in a formal way on Christmas Eve, 1814, by the signing of a treaty which English and American commissioners had negotiated in the Belgian city of Ghent. The treaty was ratified and given effect early in the year 1815. For several years appropriate committees have been developing an organized movement for making the centenary of the Ghent treaty not only memorable in its celebration, but also in a variety of ways educational and useful. An important conference was held at Richmond, Va., last month for the further perfection of these plans; and the support of the State Department and of Congress has been assured. The celebration will not be confined to the people of the countries directly concerned in the Treaty of Ghent, but will serve to call attention also to the good fortune of the United States in its long record of peaceful relations with France, Germany, and other leading powers.—From "The Progress of the World," in the American Review of Reviews for January.

"Elixir Saloform Comp., Flexner." Contains 20% Alcohol. An efficient remedy for Rheumatism, Gout, Cystitis and Uric Acid Solvent. Prepared for physicians' prescriptions only. Robinson-Pettet Co., incorporated.

Abstracts of the Leading articles of the month.

Treponema in the Brain of General Paralytics.—Levaditi, Marie and Bankowski (Ann. de l'Inst. Pasteur) show that by proper technic and systematic examination of each cerebral convolution the treponema can be found in the great majority, if not in every case, of general paralysis. Fresh brains should be used, the necropsy having been performed as early as possible. Each convolution is examined, beginning with the posterior zones of the frontal. After dissection of the pia mater a small fragment of cerebral cortex is cut off and an emulsion made by adding a few drops of saline. The emulsion serves to make a preparation for the ultra-microscope and for smears, care being taken to first dilute it. The smears are colored (1) with Indian ink, (2) by Fontana's method (see Pathologica, 1913, No. 109), (3) by Loeffler's process. By the second method the spirochetes are colored brown-black on a yellow ground; it is easy to distinguish the nerve fibrils, which are colored clear yellow. Nine fresh brains of typical general paralytics were examined by the above processes, with eight positive results. On the other hand, sections impregnated with silver gave only one positive result, in one instance being negative when the rapid methods showed enormous quantities of spirochetes. Of the rapid methods, examination by the ultra-microscope appears to be the best, and the authors recommend beginning with an examination of the convolutions of the anterior region of the brain by this means, afterwards controlling by the other methods. All eight subjects died after apoplectiform seizures. It may, therefore, be concluded that treponema constantly exist in the cerebral cortex of general paralytics who die in ictus. The quantity varies sensibly, and a striking fact is the disposition of the parasites in more or less circumscribed foci. They are only found in the cortex proper, and an examination of the white matter immediately adjoining a rich focus gave negative results. In one case, spirochetes were found in the fluid from the left lateral ventricle. From these facts the authors deduce that general paralysis is a disease due to the pululation of the treponema in the cerebral cortex and to the lesions which this pululation engenders. The proliferation of the parasites appear to proceed by successive attacks; the localization varies, being most frequent in the anterior zones. When a parasitic focus is spontaneously sterilized after having caused indelible lesions, another forms in a convolution hitherto intact, which explains why the areas most affected macroscopically are not always the richest in parasites. It seems probable that the ictus apoplectiforme of paralytics corresponds to these acute treponemic attacks, especially when localized in the motor zones, for in the only case in which the parasite was not found, in spite of well-marked lesions, the patient had no apoplectiform attacks, but died of general enfeeblement.—British Medical Journal.

A Clinical Study of 100 Cases of Pneumonia.—Lindsay (British Medical Journal) says that in the presence of any signs of circulatory weakness strychnine is to be given hypodermically, and ammonia and digitalis, and sometimes caffeine, by the mouth. Alcohol is used sparingly, and only in the more serious cases and in moderate or small quantity. Of the 100 cases in his series, only 39 received any alcohol. Brandy was the usual stimulant, and the amount seldom exceeded three or four ounces. In the presence of unusual dyspnea or cyanosis oxygen is administered, the gas being passed through alcohol. Tepid sponging is vigorously practiced in every case, and cold sponging when the indications seem to point to its use. Antipyretics or expectorant drugs are not administered.

Bleeding was not employed in any of this series of cases, though he had had some small experience of that procedure elsewhere. For the relief of persistent insomnia, paraldehyde, bromides, and morphine are sparingly used. The various complications, when they arise, are treated upon the usual lines. After the crisis all special medication is suspended, the patient is allowed a liberal diet, and some tonic is administered. Alcohol is always stopped at this stage, unless there are serious complications.

He has never used ice-bags or ice poultices to the chest in pneumonia, and can furnish no evidence as to their value. This method of treatment does not appear to be gaining favor. There seems to be some danger that it might depress the heart. As clots are found postmortem in the right heart in many fatal cases of pneumonia, he tried the administration of citrates and citric acid in a few cases some years ago, but could not satisfy himself that this line of treatment presented any advantage. The Dr. has made a limited trial of serum treatment, but has not felt encouraged to persevere with this method. On theoretical grounds pneumonia seems a particularly unpromising field for vaccine therapy. We may yet get an efficient serum, but up to the present no such remedy appears to be available.

He has seen bleeding employed in a few cases, and there is no doubt that the removal of a few ounces of blood tends to relieve the laboring right heart, and to mitigate the dyspnea. But he states he has no wish to see this long-discarded method reintroduced into general favor. If applied without great discrimination, it is quite capable of turning the frail balance against a patient at the critical juncture. We should need some definite statistics to prove the efficacy of venesection before adopting it as a common expedient. Text-books give the practice a sort of qualified benediction, but cautious practitioners are shy of it at the bedside.

The value of alcohol in pneumonia is a vexed question. Lindsay asserts he inclines to its use in moderate quantity in severe cases, and in the presence of circulatory weakness, especially in patients who are no longer young and who have been accustomed to it in health. In mild attacks, in most young patients, and where the pulse is good, it is better withheld. It should certainly not be given in any routine fashion or in the excessive quantities which were at one time in vogue. If we may often be in doubt as to the wisdom of prescribing alcohol, we can generally tell without much difficulty whether, when given, it is proving of service. The effects upon the pulse, the nervous system, the skin, the urine, and upon sleep are the chief points which should guide us in this matter.

Spinal Anesthesia by Tropacocaine.—Morrison (British Medical Journal) recommends tropacocaine for spinal anesthesia.

Admitting the high claims of stovaine and novocaine, but restricting his report to tropacocaine, Morrison sums up the position of spinal anesthesia as follows

1. It is a procedure of proved value and simple technique.

2. Its province is subdiaphragmatic operations.

3. There is no prohibitive age limit.

4. By blocking afferent paths it prevents surgical shock.

5. It induces muscular relaxation, quiet breathing, and abdominal stillness, and thus conduces to rapidity and safety in abdominal surgery.

6. Used with discretion in conditions of extreme asthenia and instability of the medullary centers due to toxemia, exhausting disease, traumatic shock, and old age, it is superior to ether and chloroform.

7. It promotes the patient's comfort and nutrition in the postoperative stage.

8. Its scope is amplified with the aid of scopolamine and morphine.

9. By lowering blood pressure it tends to faintness and respiratory depression. The patient should therefore be carefully watched after injection, and treated as required by means of diffusible stimulants, pituitrin, saline infusion, and artificial respiration.

10. In a small percentage of cases it is inadequate, and must be supplemented by general anesthesia.

11. It increases the possibilities of surgery by facilitating the work of a surgeon in the absence of a competent anesthetist or assistant.

12. The procedure should be taught in medical schools.

Radium in the Treatment of Malignant Disease.—Knox (Brit. Med. Journ.) says that the class of case which offers the best results in radium treatment also holds out the best promise of success by operation. The earlier we can treat a case of malignant disease the surer can we be of the result. At the very outset we must decide between the two, and in the present state of knowledge of radium and its effects upon new growth the choice must be given to early operation. We cannot tell when a case is going to do well under radium. Two cases of the same disease, and to all appearances precisely similar, may react quite differently to radium. Further, should the growth not promptly yield to the treatment, it may happen that the stimulation of the tissues composing the growth leads to a rapid extension of the disease; secondary nodules appear at the periphery of the tumor and grow rapidly, or metastases may appear quickly in deeper parts. Even when, to all appearances, the growth has disappeared, sooner or later recurrences may follow, and this after what at the time seemed adequate prophylactic treatment.

Rodent ulcers, when treated early, are particularly amenable to radium. They may remain healed for considerable intervals, yet in the end a small recurrence appears at the periphery of the ulcer, and if not promptly dealt with may spread. Repeated recurrences have frequently to be dealt with in the same patient.

Admitting that in every early case of malignant disease operative measures should come first, there are some conditions in which radium should be our second choice:

1. The patient may refuse operation, and thorough treatment by radium in early cases may lead to a disappearance of the growth.

2. Or the patient may not be in a suitable condition for operation, and again radium may be found useful.

3. Or it may be that the operation must be so radical that the risk to life is great. Radium should here be given careful con-

sideration as a remedial agent.

4. Inoperable cases of malignant disease are generally handed over for radium treatment. Many of these are hopeless from a curative point of view. Here radium will relieve pain, diminish discharges, check hemorrhage, and frequently heal up ulcers of considerable size.

For comparison of results, it is well to subdivide the group of inoperable cases into the following classes:

(a) Advanced cases of malignant disease, in which it is obviously impossible to hope to do anything beyond relieving the pain and other distressing symptoms. This relief is sometimes a marked feature in radium treatment. Dischages may be lessened, and when hemorrhage is a feature in the case, especially if it be a general oozing from the growth and surrounding tissues, a sufficient exposure to the action of radium will lead to a cessation of the bleeding. Failing the prospect of achieving either of these results, such advanced cases should be left severely alone, as their treatment by radium can only bring discredit upon it.

(b) Less advanced cases, in which there may be a prospect of inducing degenerative changes in the tumor mass which will lead to a diminution in size. Some cases may thus be brought within the range of operative treatment. The method of treatment adopted must be thorough—full exposures given at regular intervals and the patient kept under observation. The treatment may be external, or, in selected cases, tubes of radium may be buried in the substance of the growth. Inoperable tumors of the breast come under this heading.

Surgical methods may profitably be combined with the use of radium, and partial operations are a great help to the radium therapist, as it is quite rational to remove as much of the tumor as is possible in order to facilitate the use of radium. A large fungating necrotic tumor of the breast is not likely to yield to radium treatment alone, but if the surgeon removes as much of the growth as possible, then radium may be employed on the portions of the tumor left. Secondary deposits in the glands and areas drained by the lymphatics may be vigorously treated by radium, and if a diminution in size is brought about these may be removed at a subsequent operation. Life may be rendered more tolerable, and undoubtedly prolonged by such measures. Several such cases treated by radium and x-rays have shown marked improvement; enlarged malignant glands have been successfully removed after reduction in size following upon radium treatment.

Vaccines in the Treatment of Chronic Bronchitis and of Asthma.—Pirie (British Medical Journal) says that vaccine therapy holds out very considerable hope of effecting improvement in chronic bronchitis even in cases which have proved resistant to other modes of treatment, but—and there is aiways a but—it cannot be said to be certain of doing so, and in all cases it should be made clear to the patient at the outset that fairly long continued or repeated courses of inoculation are likely to be necessary to obtain good and lasting results. The average length of time for which his sixteen cases were under treatment, constantly or intermittently, was nine and a half months.

The Dr. advises any patient, even when supposed to be cured, to have occasionally a few protective inoculations against any organisms to which he is specially sensitive, and more especially before the onset of winter. For this purpose either an autogenous vaccine might be employed, or one of the several so-called "combined vaccines for colds" which are on the market, and which aim at producing immunity against all of the commoner cold-causing germs. He has no personal experience of the use of these, but one objection which they seem open to is that few of them are suited in their composition to the infections which are most common at any one time.

The dosage of the vaccines employed has varied considerably in the different cases, but the general tendency has been to increase the amounts given, pushing the dose in each individual case until one is arrived at which produces after inoculation some definite reaction in the way of general discomfort, slight feverishness usualiy, and not infrequently some temporary aggravation in the amount of the bronchial secretion.

Vaccine treatment is not, of course, recommended to the exclusion of other measures, but simply as an "extra" where these fail to give satisfactory relief. The ordinary medicinal and hygienic measures applicable should be employed, and, in particular, he considers it highly important to cleanse the nose and nasopharynx at least twice daily with some form of douche and swab to remove mechanically at least some of the offending organisms which are constantly lurking in these situations, ready to infect the lower respiratory passages when given a suitable opportunity.

Treatment of Tenia by Thymol.—Artault (Bull. de therap.) in all cases of tenia, gives crystallized thymol, 25 cg. in cachets daily, fasting. Generally the tenia is expelled on the third or fourth day, but it is

advisable to continue the treatment for a week to insure the complete expulsion of the parasite. The process is simple, the tolerance is perfect, and the ill effects are nil. The author has treated twenty-three cases with perfect results, and recommends the treatment as the method of choice. The only precaution to be observed is that the patient shall abstain from alcohol while taking the treatment.—British Medical Journal.

Treatment of Hematemesis.—Grunbaum (The London Practitioner) states that one of the first measures in hematemesis should be to assure the alarmed patient that the condition is common and recovery the rule. Mental agitation can be further diminished by an injection of one-third grain of morphine. The writer doubts whether ill effects result from carefully transferring the patient to a bed. The head should be low if the loss of blood is so great as to lead to oligemia of the brain and consequent faintness, but in the absence of this the patient should be arranged in the position he finds most comfortable

As for drug treatment, suprarenal extract in one dram (4 c.c.) doses of the one in 1,000 solution is advised by the author. To avoid the secondary vaso-dilator effect, the drug must be given at short intervals—not over an hour. Ferric chloride and tannic acid are unsatisfactory, for they convert the blood in the stomach into a hard mass, which irritates the mucosa and leads to vomiting or retching. Ergot is unsuitable because it is absorbed and leads to a rise of blood pressure. Turpentine is of great use when adrenal extract is not available; but if given frequently, even in small doses, this agent may lead to nephritis. If the adrenal extract, together with one grain (0.06 gram) doses of neutral calcium chloride, does not arrest the hemorrhage, lowering the blood pressure with aconite may be considered. The patient should be informed that this drug will make him feel very faint and ill, but that it cannot be helped, and that in a few days' time great improvement will occur. Two minims (0.12 c.c.) of tincture of aconite may be given every half hour until the heart rate falls below sixty or the pressure below ninety mm. Hg., or the heart becomes very irregular. If the stomach is full of blood, renderiug administration of the drug by mouth futile, a dilute solution of aconite in slightly alkalinized normal saline solution may be given hypodermically; or, occasionally, tincture of aconite may be added to enemata.

For the first three or four days the stomach should be kept empty and water supplied to the patient in the form of saline rectal enemata, six ounces (150 c.c.) every four hours. Only if the patient is very emaciated are nutrient enemata advisable.

When the hemorrhage has stopped, treatment should be directed to .healing the ulcer. The diet should be liquid, and rich in proteid, in order to fix hydrochloric acid in the stomach. It should not contain albumoses and meat extracts. Feeding should be at relatively short intervals, and it may be advisable to neutralize the acid secretion by giving moderate amounts of bismuth subcarbonate, magnesium oxide, sodium bicarbonate, and calcium carbonate. The food should not be that especially liked by the patient, as this would lead to a more pronounced secretion of acid. Probably the best diet in most instances consists of an egg beaten up in one half pint (250 c.c.) of milk, taken every two hours. If constipation results, liquid paraffin, when it does not cause retching and nausea, appears to be the best laxative for these cases.

Iron will hasten recovery from the anemia, but only one compound of it is suitable for these patients, the nucleide (nucleinate), which passes through the stomach unchanged, does not cause constipation or indigestion, and is readily absorbed in the duodenum. Ten grains (0.06 gram) of freshly dissolved iron nucleide may be given three times a day, its objectionable taste being largely covered with chlorform water or fluidextract of licorice.

The Technic of Suprapubic Prostatectomy.—Schloffer (Prag. med. Wochen.) states that the after treatment exerts the greatest influence upon the subsequent course of a case of prostatectomy. It is of prime importance to prevent accumulation of large amounts of blood or urine in the bladder or in the pocket left after the removal of the prostate. This can be accomplished by the use of thick, soft vesical drains, which should be inserted at the apex of the bladder and left in place until the seventh or eighth day aftur operation. On the sixth or seventh day a retention catheter is introduced, and if this functionates properly the bladder drain is removed. Irrigation should be undertaken during the first few days only when the drain becomes displaced. The retention catheter is usually left in until the fourteenth day and irrigations regularly made through it.

The Use of Short Incisions in Radical Operations for Inguinal Hernia.—Moreau (Jour. de Prac.) points out that long incisions are apt to be followed by weakening of the abdominal wall, while short ones have a number of advantages. When operating for inguinal hernia he prefers an incision of the skin 1 to 2 cm. long and about a

finger's breadth from the margin of the hernial ring, terminating below the linea umbilica spinalis. Owing to the elasticity of the skin the opening can be sufficiently dilated to permit of the necessary exploration. A small incision in the aponeurosis of the external oblique is sufficient and need not be extended to the inner abdominal ring. With slight traction the sac can be exposed as far as the internal ring. The stump after ligation and resection is left alone. In closing the hernial opening the aponeurosis of the external oblique is sutured from below upward. After suturing the subcutaneous cellular tissue the margins of the cutaneous wound are united by means of Mitchell's clamps. This operation may be done under local anesthesia. According to Moreau the advantages of short incisions are rapid healing; the avoidance of injury to vessels, so that hemostasis is more easily carried out or unnecessary; less risk of infection owing to the higher situation of the incisions away from the scrotum and genito-crural fold; greater firmness of the abdominal wall even in cases of suppuration, as well as the better cosmetic results. Of course, short incisions are contra indicated in cases in which eventration is required, or extensive adhesions of the omentum, scars of former operations, or extreme obesity are present.

Operation for Perforative Typhoid Ulcer.—Mitchell (Brit. Med. Jour.) mentions three successful operations for typhoid perforations, which serve to fairly emphasize the following points: 1. The modern system of treating typhoid in well-equipped hospitals, where such a complication as perforation is likely to be recognized at the earliest possible moment and immediate arrangements made for operation, is eminently favorable to surgical success. 2. It is very desirable to operate as rapidly as possible, and to avoid all unnecessary handling and exposure of intestine. These patients are totally unable to bear much manipulation. 3. The quickest way to find the perforation is to go straight for the ileocecal valve and trace the ileum upwards. It will rarely be necessary to handle more than 2 to 3 feet of bowel. 4. All sutures should be of catgut, as silk or linen is almost certain to become infected and give rise to a troublesome sinus. The catgut used by the author is prepared by boiling in absolute alcohol for thirty minutes, and stored in tincture of iodin one part, proof spirit ten parts. 5. These patients bear the Fowler position and continuous rectal saline quite well. 6. Coliuria being a very likely complication. it appears wise to put these patients at once on alkaline treatment. Whether as a result of this procedure or not, his last two cases showed no sign of this troublesome ailment.

Treatment of Flatulence.—Flatulence, says Prof. Robin (The Medical Press and Circular, London), is one of the most frequent symptoms of every form of dyspepsia, especially in that due to fermentation.

At the beginning of the process of digestion flatulence is purely gastric, later it becomes intestinal and manifests itself by quantities of wind and tympanites. It is characterized by frequent eructations and bubbling sounds synchronous with the respiration; the neighboring organs are more or less compressed, provoking in many cases dyspnea, oppression, palpitations and cardiac intermittence. When the gases cannot find a way of escape meteorism sets in, to the great danger of a weak heart.

Herschell believes that the cardiac compression may provoke sudden death, and those persons known to suffer from disease of the heart, who are found dead in bed in the morning, succumb during the night to syncope produced by flatulence.

Flatulence has a double origin: Gas developed during gastric fermentation; air swallowed with the food or otherwise (aerophagia).

The gases engendered by fermentation are but little abundant, but the presence in the stomach of air swallowed with the food increases the amount of gas developed during fermentation. These gases are composed of azote, oxygen, carbonic acid, but also hydrogen and, in certain cases, sulphuretted hydrogen. Contrary to what is observed in pure aerophagia, these gases are more or less odorous.

The treatment of flatulence due to gastric fermentation is that of fermentation. Small doses of fluoride of ammonium:

Fluoride of ammonium 6 grs.

Water 10 ozs.

a tablespoonful in the middle of each repast (2).

In the case of lactic fermentation the double iodide of bismuth—erythrol—should be preferred.

Erythrol ½ gr.

Prepared chalk 5 grs.

for one cachet; taken after meals.

The nature of the food ingested should receive attention; every article to be excluded that has tendency to ferment: pork, game, shell-fish, cheeses, grease, sauces, etc. It is also necessary to aid rapid evacuation of the stomach by giving bitters to stimulate the muscular coat of the organ—

Tincture of nux vomica 3 drs.

Hippo wine 1 dr.

Essence of aniseed 1 drop.

ten drops in a little water after meals.

Absorbents, and particularly poplar charcoal, are good adjavants.

In the second variety of flatulence, that due to aerophagia, the etiological characters are quite different. The digestive troubles are provoked, not by a dyspeptic condition complicated with gastric fermentations, but by the deglutition of quantities of air—enormous quantities in some cases. Fits of eructation appear at any moment; they are independent of the ingestion of food, come on spontaneously or under the slightest exciting cause, cease suddenly, are not painful. In most cases, aerophagia represents a simple neuropathic manifestation.

The treatment of this form is that of the cause—neuropathy. In slight cases, hydrotherapy, ether spray over the epigastrium, massage may be useful, but in aggravated cases these means are inadequate.

The patient should be instructed as to the nature of his affection, and advised to control the movements of deglutition. A good way of avoiding aerophagia outside of meals consists in keeping the mouth open as long as possible by means of a piece of cork or india-rubber placed between the teeth, thus involuntary deglutition is prevented.

Where the gas escapes with difficulty, tympanism and meteorism set in with all their complications. Here Seltzer water may be tried, ether may be given, while gentle massage is made over the epigastrium.

The Invention of Spectacles.—Oliver, in the British Medical Journal, states that there is ample evidence to show that biconvex lenses were used by the ancients as burning glasses. Pliny relates that glass balls filled with water were used by physicians for burning, and were to be bought from medicine dealers, and, perhaps, formed part of the armamentarium of the practitioner. That glasses were invented at the end of the thirteenth century in Italy is abundantly shown by the great majority of contributors to the history of this subject, and either oy Armati and Spina together or independently of each other. At the same time in Germany and Flanders old people were using glasses. The first medical man to mention glasses was Bernard Gordon, educated at Salerno, and professor in Montpellier. He said that they were not necessary, thanks to his remedies for eye complaints, which so excelled that they made those whose sight was failing able to read small print without the use of glassei. Guy de Chauliac, body physician to Popes Clement VI, Innocent VI, and Urban V, also lauded his own eye lotion, but added: "If this doesn't relieve you, then try eyeglasses." No one at this time knew anything at all about the refraction of light, hence the senseless talk about the various remedies. The laws of optics, relating to glass lenses, have been known only since the time of Maurolycus (A. D. 1497-1575) and the immortal Kepler (A. D. 1571-1630). The physician who first ordered glasses in a professional capacity was one Montanus, a teacher in Padua. He ordered protecting glasses, reading glasses, and, some say, prisms. Physicians at this time evinced great hostility to the wearing of glasses, and owing to the way in which they dissuaded the people from their use, it was not to be expected that it would spread very rapidly. In early times men were strongly opposed to this custom, as at first glasses were ill-shaped and most disagreeably striking in appearance, and, more than this, they directed the attention to a physical disability. Patients wearing glasses were made fun of, and not altogether in a very tender manner. Their prohibitive costliness rendered the wide adoption of spectacles impossible. At the end of the sixteenth century the price per pair, expressed in terms of present-day value, was from fifty to a hundred dollars. From this circumstance glasses which frequently had costly ornamental gttings were seldom seen, and then in the possession of wealthy people only. The history of the development and use of the concave lens is very different from that of the convex variety; it came on the scene much later. There is no mention whatever of concave glasses by the ancients, though short-sightedness was well known, not as an error of refraction, but as a weakness of the eye. One can assume with a fair degree of certainty that concave glasses came into use about the middle of the sixteenth century.

Is Any Illness In Infants Due to Feeding?—Hone (The Australasian Medical Gazette) says that in reasoning as to the probabilities of any illnesses being due directly or indirectly to teething we are on the same insecure ground. The fallacy here is that we unconsciously drift into the old loose way of thinking of the period of dentition as a particular state of body, or an entity in itself. For instance, dentition is a physiological process. Still and others reply that "pregnancy is a physiological process, that no one would deny pregnancy may affect the health in many ways." That is to say, one thinks of dentition as a definite state like pregnancy, lasting some 2½ years instead of 9 months and terminating in the safe or difficult delivery of the twentieth tooth. One has only to put it in this

way to see the absurdity of the argument, and the contrast to our view of what occurs at the eruption of the permanent tooth. The only other supposition is that this state supervenes some 20 times or so in 2½ years with the eruption of each tooth or batch of teeth, and that is unthinkable. Therefore, when one talks of dentition inducing an over-excitability of the nervous system, one can only mean that the eruption of a tooth or batch of teeth has this effect on particular individuals. For we all admit that in many cases dentition causes no symptoms at all; the contention is that in certain cases, particularly in infants of a neurotic type, this irritability is set up. In such a case the fault must be either in the process of eruption of the tooth, or in the infant himself. All the evidence is against the former supposition; there is no bony obstruction; the opening in the alveolus is larger than the tooth itself; there is no rigid obstruction in the gum. If the fault be in the child, then the same result ought to follow the eruption of each tooth, but in no case that I have met has the same sequence of symptoms accompanied the eruption of every tooth. On the face of it, such a series of repeated coincidences must be extremely rare; in all the supposed series I have come across, more detailed investigation has revealed that there was not such a thorough coincidence as was asserted.

Idiopathic Epilepsy in Children.—Nolan (Dublin Journal of Medical Science) called attention to the importance of the "Recognition and Treatment of True Idiopathic Epilepsy in Children." He says the management of the child should be based on general hygienic and dietetic lines. Regulated periods of exercise and instruction must alternate with regular periods of rest and repose in his judgment. Corporal punishment must be absolutely prohibited. All over-exertion strain, whether mental or physical, must be assiduously guarded against. The usual stimulating dietary of tea and meat had better be abolished, and milk and cereals substituted. Drug treatment had better be avoided at this stage, save the administration of general tonics and necessary aperients. A carefully regulated life with a purin-free diet and a small daily dose of bromide is the treatment par excellence. The bromides do not require to be given in great quantities or at intervals during the day. The smallest dose which appears to exert a favorable influence over the fits should be taken as the maximum, and this never should exceed 60 grains. The effect is intensified by the full quantity being given at one time. The best time is at night or before rising, depending on whether the patient is subject to diurnal or nocturnal attacks. Plenty of water should be given w th the dose, and sufficient laxative to insure a daily evacuation of the bowels. The best adjuvant is the syrup of Virginian prune.

The Treatment of Umbilical Hernia in Infants.—Smester (Jour. de Med. de Paris) describes a plan of treatment that he has adopted for thirty years with great success. The hernia is reduced and the edges of the ring are approximated by the finger and thumb of the left hand, while successive strips of court plaster are applied, so that a sort of pad is built up. Then, the edges of the ring having been secured, the little pad is fortified by a strip or two of diachylon (which must not, however, touch the skin) or by more court plaster. Finally, the whole construction is secured by collodium elasticum. The advantages of this little dodge are that the hernia is well retained, that the edges of the ring are approximated, that no hindrance is created to the play of the abdomen, and that the bath is not interfered with. Smester has not once in thirty years known it to fail.

Confirmed High Blood Pressure.—Mantle (Proceedings Royal Society of Medicine) remarks that it has been one of the important by-products of the present system of determining blood pressure, that the discovery of a high tension has so often led to immediate endeavor to reduce it at any cost. Owing to the gradual increase of blood pressure in these cases each individual readjusts his cardio-vascular mechanism to compensate this, and the physiological limit is now but 140 or 150 mm. of mercury, but may be 220 or 250, and to reduce this pressure below the new physiological limit is not only not indicated, but is bad therapy. Professor Oliver remarks that "The fact should be emphasized that supernormal arterial pressure is not itself a primary condition to be attacked or controlled as such. It is invariably a result of some pathological cause or causes, and it is, moreover, often a necessary evil, the result of conditions we cannot remove, and then it must be looked upon as a compensatory effort, as one of the naturat defences of the body." After narrating the history of two cases of this nature, the author proceeds to discuss the true position of cases of high arterial pressure. These patients always give us anxiety, for we are confronted with two dangers: there is the danger of the rupture of a weak vessel, if we do too little, and a danger of too much in lowering pressure and weakening the cardiac force. A careful history of the case should be taken, and a complete investigation made of the cardio-

vascular renal and alimentary systems in order to try and find out the cause of the high pressure, such as errors in diet, alcohol, syphilis, lead, and excessive worry. If the left ventricle is hypertrophied, it suggests the pressure has been persistently high for some months or years. Experience teaches that with a restriction of red meats and alcoholic drinks from the dietary of those who take them freely, the pressure, if not a permanently high one, usually diminishes, and this argues that purin bodies and alcohol probably act as vaso-constrictors. The proof of the splanchnic vessels being some of the earliest to become affected in arterio-sclerosis point to the necessity for the relief of congestion of the visceral vessels, which can be done by judicious purgation, 1 grain dose of calomel, and saline purgatives, two or three times a week. A free action of the skin should be encouraged by artificial means, such as massage, douche, and Nauheim baths, when these can be obtained, and intestinal lavage in cases where constipation is obstinate. The cardinal principles of treatment resolve themselves into a strict regulation of the intake and an active outlet for the waste products, and moderate exercise followed by rest is desirable to give a better distribution of the blood, but sphygmo-manometric observations must be made from time to time as a guidance in treatment. If in spite of treatment the pressure continues high, we must conclude that this is a case of permanent super-normal pressure, and so long as no urgent symptoms arise, the patient may be allowed to do the work if he avoids excitement and sudden strain. We must not use any active means to reduce the pressure, remembering that it is probably an advantage, and necessary that the pressure should be high for the maintenance of an adequate supply of blood to vital organs. The author uses drugs of the vaso-dilator type only in emergencies, considering that it is sounder treatment to get rid of the bodies in the system which contract the peripheral vessels rather than by dilating the blood vessels with the offending poisons still intact. He gives iodides very sparingly, if at all, but if there is any syphilitic history they may be pushed.

Miscellaneous.

Treatment of Severe Anemias.

According to Weber, it is not necessary to transfuse large amounts of blood in the treatment of pernicious anemia since the repeated injection of small amounts will accomplish the same purpose and will usually stimulate the bone marrow sufficiently to cause a pronounced improvement. The author generally employs 5 Cc. of defibrinated blood. In the majority of cases, no after-effects were noted, but in one there was high fever for four days, with consolidation of the lung. Such accidents can be avoided by placing the defibrinated blood into the ice chest for 6 to 24 hours before injecting. The technique is as follows: 20 to 30 Cc. are withdrawn from the donor and allowed to flow into a sterile Erlenmeyer flask. The blood is then defibrinated by beating for 5 minutes with a sterile glass rod and then filtered through sterile gauze into a second flask. The following day, the blood is warmed and then injected intravenously in doses of 5 Cc. In all cases, the patients should receive arsenic subcutaneously and all the other measures employed for this disease.—Muench. med. Woch.

Local and Conductive Anesthesia.

A. W. Meyer, of Heidelberg, (v. Bruns' Beitr. z. klin. Chir. Bd. 83, H. 3) recommends partial local anesthesia for locating the position of the large nerve trunks in atypical conditions, for extraction of deep seated foreign bodies. The application of local anesthesia in the form of novocain-suprarenin is possible in inflamed tissues. The method has proven its value in setting fractures (infiltration into the tissues surrounding the fracture) and also for diagnostic purposes; for orthopedic treatment (infiltration into or around the joints). Hirschel or Kulenkampff's anesthesia may be used. If the latter is applied for upper extremities, the supraclavicular nerve and some branches of the intercostal and intercosto-brachial must be infiltrated with the novocain-suprarenin solution from the border of the sternocleidomastoid. For larger operations on the lower part of the arm and hand, subcutaneous nerve anesthesia in the elbow is advisable, whereas for operation on the palmar side of the hand, the subcutaneous injection in the median or ulnar nerves is sufficient.—Deutsche med. Woch. No. 26, 1913.

Strontium Bromide in Large Doses in the Treatment of Epilepsy.

Callender writes that he has found that strontium bromide given in large doses more effectively controls the attacks of epilepsy than the usual bromides and that its administration is more frequently followed by a cure. To effect this result, he states that the treatment must be persisted in over an extended period of time, in many cases 10 to 12 months' treatment is necessary, and

in a few cases even a few months longer.

Excluding those cases which are of old standing and in which the will power and brain seem impaired, and excluding those due to reflex causes, he finds all other cases susceptible to the treatment. He gives the strontium bromides in doses as high as one dram, three times daily. The cases which most readily yield a good result are the young adults. Attacks during the time the patient is under treatment are rare. The author finds that though the large doses are well borne by the stomach they cause a great deal of mental depression, but the patient, encouraged by the prospect of recovery, and suffering from the recollection of the attacks, readily bears the inconvenience. Acne seems to be much rarer than after the administration of the other bromides.—The London Lancet.

The Treatment of Acute Articular Rheumatism.

Klare, Hohenweise b. Schmiedeberg i. R, notes "I convinced myself of the specific influence of melubrin in acute articular rheumatism in a most striking case. I gave it to a young man, 23, with a severe attack of acute articular rheumatism (almost every joint was affected). He has previously been treated with large doses of salicylates for nearly three weeks without the slightest influence on the temperature or the swollen joints. On the first day under melubrin treatment (75 grains) the temperature declined from 38-39° C. to 27.3° C. The patient was able to move his shoulders without pain, although previously they had been especially painful: From 45 to 75 grains of melubrin were given daily with the result that the patient became free from fever on the third day, and the affected joints cleared up within a few days."—Deutsch. med. Woch., No. 33, Aug., 1913.

Intravenous Infusion by the Drop Method.

Excellent results have been obtained by Friedmann by intravenous infusions given by the drop method. A canula is inserted into a vein at the bend of the elbow and is fed from a reservoir attached over the bed. A special clamp regulates the rapidity of the flow so that 50 to 200 drops per minute can be infused. The solutions employed were saline with or without digalen or epinephrin. The method is serviceable in exhausting diarrheas, cholera, ileus, carcinoma of the stomach and all infectious diseases accompanied by collapse. The blood pressure will not rise so suddenly as with the rapid infusions formerly practiced and the heart and arteries remain under the influence of the drugs more steadily so that the body has opportunity to overcome the collapse. The entire duration of the infusion was 5 to 23 hours and the amount of fluid infused 3 to 5 litres. The heart is never strained and the flow of urine is increased to a remarkable degree. Even patients with renal disease tolerate the amount of salt introduced in this way, Other drugs can also be employed in this way.—Muench. med. Woch.

Treatment of Diphtheria Bacillus Carriers.

Rolleston treated ten chronic diphtheria bacillus carriers by spraying and swabbing the throat or nose with a bouilon culture of Staphylococcus pyogenes aureus. In six faucial cases the findings became negative within two to seven days after starting the treatment. In the two nasal cases the treatment was ineffective. In all but two cases a mild form of sore throat was produced, but no complication ensued.—Brit. Journ. of Child. Dis.

A Reaction to Differentiate Human from Cow's Milk.

Bauer states that if there be added to two or three cubic centimeters of human or cow's milk one drop of a one-fourth of one per cent. watery solution of nileblue sulphate (Grubler), both specimens will be stained blue—but greenish blue in the case of cow's milk and violet blue in the case of human milk. If to either specimen there be added five times the volume of ether, and if the mixture be vigorously shaken, it will be noted that the cow's milk retains its blue color, while the human milk is decolorized. —Monatsschrift fur Kinderheilkunde.

Iodine in Corneal Ulcer.

Ganilla treats all cases of ulcers and ulcerations of the cornea with iodine, irrespective of the cause. The method he employs is the following: The eyes having been previously anesthetized with a few drops of 4 per cent. solution of cocaine, the end of an ordinary wooden applicator is sharpened to a pin's point and a little cotton-wool firmly wound round it. The point is dipped in tincture of iodine and the surface of the ulcer gently touched with it. The conjunctival sac is next thoroughly irrigated with distilled water.—British Medical Journal.

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

Case of Paralysis of Both Internal Recti with Slight Ptosis.

Harries-Jones reports the case of a child aged 5 years in whom there was almost complete paralysis of the third nerve on both sides; the eyes were divergent, with widely dilated pupils which did not react to light or accommodation. Ptosis was only partial. The eyeballs did not move upward, downward, or inward. The optic disks were pale on their temporal sides, but the vessels were normal, and there was no sign of there having been any optic neuritis. The history of the case was peculiar, the mother stating that the child went to school last January (six months ago) "quite right," but returned in the afternoon with the eyes in the present condition. There have been no further symptoms—no headache, giddiness, or sickness.—Proceedings of the Royal Society of Medicine.

A Royal Commission on Venereal Disease.

The Lancet, of June 28, contained a plea for a Royal Commission on Venereal Disease by Sir Malcom Morris, in which the urgent need for such an inqairy was insisted upon. In the Morning Post, of July 22, there appeared what may be called a manifesto to the same effect, to which was attached an imposing array of names of distinguished members of the profession. Among the signatories are Sir Thomas Barlow, Sir William Osler, Sir Clifford Allbutt, Sir William Church, Sir Henry Morris, Sir John Tweedy, Sir James Barr, Sir Robert H. Woods, Sir John Bland-Sutton, Sir W. Watson Cheyne, Sir Francis Champneys, Sir John Rose Bradford, Sir Alfred Pearce Gould, Sir Victor Horsley, Sir Malcolm Morris, Sir George Savage, Sir Andersou Critchett, Dr. Herringham, Dr. Mott, Mr. D'Arcy Power, Mrs. Scharlieb, and Mr. Charters J. Symonds.

There oould scarcely be a list of persons more eminent in their several ways or more representative of the medical profession. It is pointed out in the manifesto that while the State has taken effective action in a number of directions for the control of disease, no organized effort has been made for the prevention of venereal disease. As to this disease, which undermines the vigor of the people, saps the strength of the army and navy, causes incalculable suffering and unhappiness, and often blights the lives of the children who are the hope of the future of our race, there has hitherto been a conspiracy of silence. The subject is not a pleasant one, but the evil is so serious that it is time it should be faced by the public. When the matter was discussed last year at the Royal Society of Medicine, it was stated that in London alone 40,000, and in the whole United Kingdom 130,000 new cases of syphilis occur every year. Recent research has thrown new light on the etiology of the disease, and vastly improved means of treatment are now available. The time, therefore, is opportune for an organized effort on a comprehensive scale to reduce the incidence of these diseases. In order that public opinion may be aroused to the gravity of the matter, a full and authoritative investigation is necessary, and the eminent members of the profession who have appended their names to the letter to which reference has been made call for the appointment of a Royal Commission, with a substantial majority of medical men among its members, to inquire into the facts and recommend what steps, prophylactic and therapeutic, should be taken in regard to venereal disease. The meeting concluding where, the representative meeting before concluding its labors unanimously adopted a resolution expressing its sympathy with the appeal, and the demand thus solemnly made by the whole of the medical profession for a public inquiry into this most important matter can scarcely be resisted. Although the reports of Royal Commissions are too often treated like the utterances of the chorus of a Greek play, there seems to be no better way of securing a thorough investigation. But, to be of any use, the report must not be consigned to the dusty tomb of a pigeon-hole, but must be followed by immediate action. Already, as was pointed out in the Journal of May 10, 1913, page 1023, Australia has entered on a campaign against venereal disease, which gives promise of satisfactory results. America, too, is awakening to the importance of such a movement. The Chicago Vice Report, issued a few years ago, has been followed

by an investigation on the same lines in New York. As the result of an inquiry, necessarily imperfect owing to the want of proper response on the part of the profession, Dr. Biggs thinks it probable that the number of new cases of venereal disease which occurred in New York last year amounted to 200,000. These figures, he adds, give a very inadequate notion of the terrible gravity of the problem. It would be foolish to seek to comfort ourselves with the thought that we are less afflicted than New York. Our case, as has been shown, is bad enough to call urgently for remedy. In these days of easy rapid communication between all parts of the civilized world, syphilis may truly be regarded as an international scourge. We hope it is not Utopian to dream of a time when the nations of the world will join in a war against venereal disease.—British Medical Journal.

Rheumatoid Arthritis.—Barr (British Medical Journal) says that to correct the acid fermentation and improve the motor function of the stomach a good combination consists of 30 grains of sodium bicarbonate, 10 grains of potassium bicarbonate and 15 to 30 grains of aromatic chalk in a glass of milk, about half an hour before meals, and a double dose at bedtime; often smaller doses suffice. An excellent stomachic of calcium chloride, hydrochloric acid, and minute doses of the perchloride of iron, is very useful after meals. A small cholagogue pill should be regularly administered to keep the bowels open; for this purpose an excellent mixture can be made with the sulphate, bicarbonate, and salicylate of sodium and licorice. The pancreas is also usually at fault, and to improve its action Barr often prescribes a capsule of holadin and bile salts about two hours after meals. In these cases the thyroid gland is usually too active, and so all preparations of iodine and thyroid should be avoided. Possibly suprarenal gland and pituitary extract might do good, as Bell has shown that these secretions tend to retain the lime in the system, whereas the thyroid increases its elimination, but personally Barr does not care to prescribe such powerful drugs when milder remedies may suffice. It is imperative to get lime into the tissues, and to lessen its elimination, but herein lies our difficulty, as no matter how much is administered by the mouth it may be as rapidly excreted as it is absorbed, and so none may reach the tissues; but on the other hand the acidosis in the blood may be taking lime from the tissues as well as from the intestinal tract. In order to get the lime into the tissues there must be a liberal oral supply, and the blood must be kept very alkaline. For this he prescribes freely chloride of sodium and potassium, sodium bicarbonate, chalk, lactate of lime, and calcium glycerophosphates. If it be desired to get calcium rapidly into the tissues it may be given in a very dilute form subcutaneously, say a pint of sterile normal saline solution with 0.5 per cent. of calcium chloride, and 3 per cent. of syrup of glucose. If the calcium chloride be administered hypodermically in a concentrated form, it may readily produce gangrene of the skin and adjacent tissues. Iron is best administered in the form of underdone red meat and yolk of eggs; arsenic, potassium iodide, guaiacol, and a host of remedies commonly prescribed are worse than useless.

Leucorrhea should be treated with injections, and any infection of the urinary tract should receive attention. Here vaccines will often prove useful, and the same may be said for pyorrhea alveolaris.

General massage and the Aix douche improve nutrition, and are highly beneficial; the hot air and electric light baths applied to affected joints often give much relief, but can scarcely be looked upon as curative agents. When we have cured our patient we can send her or him to Egypt, Timbuctoo, or any health resort. Encourage the patient to take a fair amount of exercise short of fatigue when the disease has subsided, and to live a godly, righteous, and sober life in this present world.

Case of Myelitis Treated with Gymnastic Exercises.

Sylvan reports the case of a man, aged 36, who in January, 1910, got a bad cold and had severe pains in the posterior and lower thoracic region. After three weeks his legs began to drag and he gradually lost the use of both legs and had to stay in bed. He went into the Middlesex Hospital where he was treated for myelitis during six months. Soon after he went to the National Hospital and was treated as an in bed patient for three months and as an out-patient for eighteen months, and he improved a little. In May, 1912, he started gymnastic treatment. The adductor muscles were contracted to such a degree that he could not get his knees apart, and could walk only with great difficulty. He often had a painful cramp in the left foot. On March 5, 1913, he could walk without difficulty, had no pain and no cramps and could seperate his knees quite easily.—Proceedings of the Royal Society of Medicine.

Advice to the Prospective Automobile Purchaser.

Buist presents a number of practical points that should guide the medical man in the selection and purchase of a motor car. Certain pitfalls in demonstrations should be guarded against. In the case of a demonstration car, one should know whether the carburetor has a larger jet orifice than in the vehicle as it will be supplied to the buyer; also the amount of gasoline that is being used in the demonstration car. One should observe systematically the manner in which the car is being demonstrated; whether the driver is manipulating the clutch when he is showing what can be done on the direct drive, and whether the clutch has been oiled so that it will slip somewhat. In some cases one can disregard the speedometer on the demonstration car. The writer has come across more than one that has been adjusted to register higher than is correct. When hill-climbing qualities are being displayed, one should be careful to observe how each rise is approached. There is no credit in climbing any rise without changing gear if one has to rush at it, any more than there is in demonstrating fast speed qualities on the flat if the machine has to take a long time to get into its stride. The medical man, indeed, should be particularly mindful not to succumb to the top gear or through drive mania when he is making up his mind concerning the choice of any particular car. On the contrary, he particularly wants a machine the gears of which will be easy to change, and the motor and clutch details of which will not cause a jerk every time the gears are changed, whereby the machine is racked and tires are destroyed. The journeyings of a medical man are not confined to main routes. Accordingly many doctors are limited as to the size of car they can take by the necessity of negotiating tortuous and narrow country lanes, such as call for an ample wheel-lock and a limited over-all length of car, also, in many cases, for a wheel-track of not too great width. The car, however, should be always proportionately wide for its size and height from the ground if it is to be stable and safe on the road. Under this head mistakes of design have been made in certain light car patterns that are too narrow, and the center of gravity of which is accordingly too high. Another feature to which attention is drawn is the design of the brakes. The rubbing surfaces should be of proportionately large area, and the means of application should be easy, so that only a light touch is needed by foot or hand, with no consequent skidding or squeaking sounds; in point of fact, these are by no means as yet eliminated from certain constructors' brake systems. Means of adjustment should be accessible; on the other hand, a type of brake that is always in need of adjustment should be avoided, and one chosen that makes ample provision for wear, so that no appreciable degree of wear occurs for lengthy intervals.—British Medical Journal.

Benzol in the Treatment of Leucemia.

Brelet states that this drug may be given by the digesttve tract or hypodermically. The latter method may be used in cases of intolerance on the part of the stomach, for the injections of benzol are very painful. The pain may be diminished by mixing the benzol with an equal quantity of olive oil. The dose to be injected is from 1.5 to 2 grams of benzol one or two times a day. Klein, who has observed poisoning result from the injection of the above dose twice a day, recommends its use only once daily. If internal administration is resorted to the drug should be given just before meals, to avoid the gastric irritation that may follow.

There is no unanimity of opinion as to the correct dose of benzol. Some authors recommend large doses given intermittently, while others advocate small doses long continued. The larger doses reach 4 and 5 grams per day. Kiralyfi prescribes gelatin or keratin-coated capsules containing the following:

℞ Benzol, chemically pure,
Olive oil, aa 0.5 gram.

In the beginning of the treatment two capsules are given twice daily, after the principal meals. The dose is increased until 3 to 5 grams of benzol are given daily. These large doses, while causing a rapid decrease in the leucocyte count sometimes give rise to albuminuria and hematuria.—Gazette des Hopitaux.

Septic Dermatitis.

Robson reports a case of this condition in a male, aged 4½ years, who began to have blisters on his body three years ago; they were never profuse. In July, 1912, a more profuse eruption began on the legs and gradually spread to the abdomen, arms, face, and neck, and lastly, to the back. The groins and axillæ have been more affected than the rest of the body. Other children of the same family were normal. Some of the bullæ were small and contained clear fluid, others were opaque. Some of the bullæ became septic and the temperature rose to 101° to 102° F. A culture taken from an apparently non-pustular blister gave a pure culture of Staphylococcus aureus. Treatment has been increasing doses of Fowler's solution, boracic baths, and injec-

tions of Staphylococcus aureus.—Proceedings of the Royal Society of Medicine.

Functional Aphasia.

Mackenzie reports the case of a woman aged 35 whose husband had been admitted to the hospital with a right-sided hemiplegia and complete motor aphasia of two hours' history; since then she had worried considerably and had not slept. On April 23, on getting up, she found she could not speak at all. The author saw her on April 25, when there was complete motor aphasia. On April 27 she was better, and could talk fairly well; on April 28 she was talking dormally, but in the evening was upset at home, and the aphasia again became complete. When outside the hospital she was talking quite normally. On eight or nine previous occasions, the first being two years and the last two weeks ago, she had similarly been aphasic, but never for more than a few hours at a time, the attacks always occurring after some speoial worry. She seemed of a very nervous disposition, but her past history did not otherwise present any special features.—Proceedings of the Royal Society of Medicine.

Congenital Eye and Heart Defects.

Greenfield reports the case of a male, aged 11 years, who was a full-time child weighing 1 paund and 15 ounces at birth. His mother has had no other children or miscarriages. He had convulsions as an infant and at the age of eight months developed a "cataract"; he has always been deaf and can hear nothing with the right ear and very little with the left. Since the age of five years he has had a left otorrhea. He can read with the left eye, but the right eyeball is small. He also has a congenital heart lesion. There is no evidence of congenital syphilis, and the author gives no history of anything to account for the condition.—Proceedings of the Royal Society of Medicine.

Diuretics.

Thomas Linn (The International Clinics) reports on the newer medicinal and non-medicinal diuretics. Linossir and others assert that in cases of actual suppression or lessening of the amount of urine, the best method is to put the patient to bed. It is a curious fact that the erect position will keep up the difficulty. In all persons of a certain age, there is more or less renal sclerosis, and the best rule is the old one—bed and milk. Physiological diuretics seems to be the future of the drug treatment. Professor Chevalier says: "The kidney should be regarded as a continuous secreting gland. It has an elective function that is excited by the products secreted by itself." He found that in the process of disintegrating, the albuminoid molecule gives off urea. As to real drug diuretics, Professor A. Chauffard presented the most original communication at the Lyons congress when describing a new diuretic, which is formed in the organism by synthesis. It is produced by giving the bromin followed by salicylate of sodium. When the urine is found to remain at about 1500 after a patient has been taking theobromin in doses of one gramme or more per day, we add to it two or three grammes of salicylate of sodium, and on the following day find the urine increased to 2500 or 3000: in one case it was even 6000. The theobromin is usually given in the morning, and the salicylate of sodium in the afternoon. This increase persists only for a few days. After a few days of rest the test may be repeated. This use of theobromin and sodium seems to be a definite measure to be resorted to tn many cases where a diuretic is needed. Nobecourt and Pesteau are us;ng very small doses of theobromin and digitalin for children. It would seem that 0.4 gramme (6 grains) of theobromin is just as effective as one gramme (15 grains). Doctor Vitry claims that calcium chloride has on excellent diuretic effect, and is useful in eliminating the chlorides. He has used it with benefit in cardiac disease with obesity.

The Doctor and the Drama.

Handley notes that no actor on the English stage can give advice to youth in difficulties with such suave yet overwhelming authority as Sir Charles Wyndham. His celebrated "It won't work" speech in the last act of "The Liars" is perhaps the best instance that can be quoted. It is the physician in him coming out, for Sir Charlos, now an acknowledged head of the dramatic profession, is a qualified medical man.—London Lancet.

Cases of Congenital Ocular Lesions.

Harries-Jones reports the following cases: Case I: Aged 9 years. Right eye: Persistent capsulopupillary membrane (pigmented). Left eye: Pigmented area on anterior capsule of lens. Case 11: Aged 23 years. Right eye: Coloboma of iris and choroid downward and inward (usual kind). Case III: Aged 23 years. Right eye: Coloboma of iris and choroid (downward and inward). Left eye: Marked microphthalmos, with coloboma of iris and choroid. Case IV: Aged 11 years. Left eye shows persistent hyaloid artery—not blood-bearing—passing from the optic disk to the posterior pole of the lens. Case V:

Child showing congenital dislocation of crystalline lenses, outward and downward. —Proceedings of the Royal Society of Medicine.

Gonorrhea and Suppurative Disease of the Uterine Adnexa.

Schottmuller and Barfurth made a careful bacteriological examination of the pus in 79 cases of suppuration in the uterine adnexa. There were found gonococci in 6.3 per cent ; streptococci and staphylococci in 17.8 per cent.; miscellaneous organisms in 25.3 per cent.; and anærobic organisms in 35 4 per cent. of the cases. The cultures were sterile in 12.2 per cent. of the cases. The authors conclude from these findings, in agreement with Doderlein, that gonorrhea does not play an important role n the production of adnexal suppuration in women. Septic infeetion is a more dominant factor.—Beitrage zur Klinik der Infektionshrankheiten und zur Immunitatsforschung.

The usefulness of good Hypophosphites in Pulmonary and Strumous affectious is generally agreed upon by the Profession.

We commend to the notice of our readers the advertisement on page xiv of this number, "Robinson's Hypophosphites" is an elegant and uniformly active preparation; the presence of quinine, strychnine, iron, etc., adding highly to the tonic value,

Medical Ethics Up To Date.

1. If called by night to attend a stranger at a distance, dress quickly and go, never stopping to ask who wants you, or if the bill will ever be paid, lest you be counted inhuman.

2. Never ask how many doctors are in attendance in a case, or how many kinds of patent medicines a patient is taking. Such curiosity on the part of the doctor is vulgar.

3. Never insult a stranger by asking for credentials, nor a patient by asking for money—pounds and shillings are the vernacular of bankers, lawyers, tradesman, and "workers."

4. Never send in a bill; patients will think you are hard up, but pay your bills promptly. Send a check; it looks better.

5. In writing a prescription write illegibly. It does not matter. The druggist will put in "something just as good."

6. Be sure to mention the fact of your being overworked, and also cholecystitis. appendectomy, opsonic index, operative work, toxemia—words which impress the laity. Your wife must tell her friends how busy you are.

7. When going by a patient's house slip in socially and tell her of some interesting case, or some operation you have just performed and incidentally mention how busy you are.

8. Never be friendly with any other doctor. It's unethical. If you think another doctor makes a guinea more a month than you do, cut him dead.

9. If another doctor's name is mentioned in your presence compress your lips, and the patient will understand that your hypertrophied good principles keep you from telling the truth, the whole truth, and a few other things. Do not have your principles so high you can't reach them.

10. If called in after another doctor has been treating a case of meningitis, make your diagnosis "inflammation of the brain," and be sure to say how much better it would have been had you been called in earlier.

11. It is understood that you would not interfere with gestation. but it is well to tell of the large sums of money you have been offered and refused.

12. If the other fellow does dot think as you do, it proves his inferior intellect.

18. Jealousy and envy are the tributes paid to superiority.

14. Do not expect the "glad eye" when you give the "cold shoulder."

The Blood Dyscrasias

with their train of symptoms pointing to tissue starvation and debility are notably responsive to the altero-reconstructive action of

BURNHAM'S SOLUBLE IODINE

Administered in this form the full therapeutic action of iodine is uniformly obtained with gratifying freedom from gastric disturbance or other ill effect. Blood impoverishment and depravity are promptly corrected and the corpuscular as well as the biochemic elements rapidly restored to the normal. Skin lesions heal readily, and the vital resistance of the tissues of the whole body is markedly increased.

When blood disorders and their complications prove intractable to ordinary reconstructive treatment, Burnham's Soluble Iodine may be relied upon to accomplish the results desired.

Send for valuable literature.

BURNHAM SOLUBLE IODINE CO.
Auburndale, Mass.

15. We have not enough "skin specialists" in the profession to offset the "wasters" in the laity.—New Zealing Medical Journal.

Lichen Planus of the Tongue and Lips.

Whitfield reports the case of a young man who first noticed a small gray patch on his tongue at Christmas, 1912. This spread until the whole surface of the tongue was involved, and two months later he developed "eczema" of the arms and legs. When shown, the tongue was evenly gray in color to the naked eye, but with a lens this grayness could be seen to be formed by fine while stippling. The inside of the cheeks showed the common white "embroidery" of lichen planus and there was a similar condition of the dry mucous membrane of the lips. On the flexures of the elbows, the groins, the outer sides of the trachanter and the body of the penis (not the glans) there were numerous typical domed papules of licheu. Some, but not all of these, were circumpilar in origin and their grouping was rather unusual in character, being distinctly corymbose in arrangement. The author states that lichen on the mucous membrane of the checks is very common, but he thinks such extensive involvement of the tongue and the dry part of the lips is unsual. The rash is not very irritable and undergoes involution after a three weeks' arsenical treatment.—Proceedings of the Royal Society of Medicine.

The Treatment of Tuberculosis.

Daniel in discussing the treatment of tuberculosis, calls attention to the discredit into which the medicamentous treatment has fallen in favor of that of the sanatorium and tuberculin. The medical treatment includes remedies which act on the general health and those which have a specific action. Among the former he mentions somatose as being peculiarly beneficial, containing as it does 85 per cent. of albumose. Of the specific medicaments he instances the creosote and guaiacol preparations as having a marked influence, but, unfortunately, at the same time a caustic effect. The sulphonate of guaiacol does not exhibit this caustic action. The idea of combining the tonic action with the specific has led to the introduction of a new compound called guaiacose. Daniel has given this preparation in 43 cases, some of which were mild, some moderately severe, and some advanced cases. Save in 2 cases, in which diarrhea occurred, the preparation was well tolerated by all the patients. The appetite was stimulated, and correspondingly the weight increased up to 6 pounds in the month. The specific action was manifested by relief of the cough, less difficulty in expectoration, the disappearance of the night sweats, and by the cessation of fever. The mental attitude of the patients was improved, and even in severe, hopeless cases subjective and objective improvement was seen.—British Med. Jour.

The Treatment of Paresis.—Pilz (Neurologisches Centralblatt,) says that after the administeration of a fever and leucocyte producing medicament, remissions of irregular frequency, unequal duration and variable degree, may be brought about much more frequently than occur spontaneously. Even in the simple dementia form, which experience has shown to be the least liable to remissions, these may be observed as a result of the therapy. In the same patient also several remissions may be produced by the treatment. While mercury and salvarsan alone have very little effect and in advanced stages seems to be dangerous, often a combination of the fever methods with specific therapy is extremely effective. In regard to the technique, the author prefers Hydrarg, succinimid, one day giving the mercury (0.02) and on the next day old tuberculin, beginning with 0.005 and increasing to 1.0 of tuberculin. Other methods may be used, as cultures of dead staphlococci and streptococci and sodium nucleinate, instead of tuberculin, and salvarsan in place of mercury. The principle is the same. With repeated doses of salvarsan, the pleocytosis in the spinal fluid often becomes reduced to normal. The objection to the use of tuberculin, that old healed lesions of tuberculosis may be made active, according to the authors' experience is not valid. Among the hundreds of cases of paretics which he has injeced with tuberculin, no such accident has occurred. The earlier the combination treatment is administered the better is the outlook for remissions. Even in advanced cases, a certain improvement or a quiescence of the advancing processes sometimes occurs. Since in from 40 per cent to 50 per cent of all cases of secondary lues, pleocytosis occurs in the spinal fluid and these cases seem to have a special inclination later on to the development of nervous disease and further since after examination by Pilcz and Mattauschek, 241 luetics who, during the first years after the primary lesion, had passed through an infectious disease, and uot a single one of them developed paresis, it appears rational in all cases, which early show a pleocytosis, to recommend a

AFTER THE ACUTE DISEASES

such as **typhoid fever, pneumonia, pleurisy, influenza,** or those requiring **surgical operations,** the return to health often depends on the thought and attention given to restorative treatment. If, however, a reconstructive like

Gray's Glycerine Tonic Comp.

is used, the result is rarely, if ever, in doubt. Unlike many remedies commonly used to promote convalescence, "Gray's" does not act by "whipping up" weakened functions. On the contrary, it improves the appetite, gives valuable aid to the digestive and absorptive processes, and reinforces cellular nutrition in ways that insure a notable gain in vitality and strength.

Weakness and debility vanish as vitality and strength appear. This is why "Gray's" is so useful and effective **"after the acute diseases."**

THE PURDUE FREDERICK CO., 135 Christopher Street, New York

LISTERINE

Listerine is an efficient, non-toxic antiseptic of accurately determined and uniform antiseptic power, prepared in a form convenient or immediate use.

Composed of volatile and non-volatile substances, Listerine is a balsamic antiseptic, refreshing in its application, lasting in its effect.

Listerine is particularly useful in the treatment of abnormal conditions of the mucosa, and admirably suited for a wash, gargle or douche in catarrhal conditions of the nose and throat.

In proper dilution, Listerine may be freely and continuously used without prejudicial effect, either by injection or spray, in all the natural cavities of the body.

Administered internally, Listerine is promptly effective in arresting the excessive fermentation of the contents of the stomach.

In the treatment of summer complaints of infants and children, Listerine is extensively prescribed in doses of 10 drops to a teaspoonful.

In febrile conditions, nothing is comparable to Listerine as a mouth wash; two or three drachms to four ounces of water.

"The Inhibitory Action of Listerine" (128 pages) may be had upon application to the manufacturers.

LAMBERT PHARMACAL COMPANY,

Locust and Twenty-first Streets, ST. LOUIS, MISSOURI

combination of the fever and antispecific therapy.

Treatment of the Dengue-Form Fever.—Kennedy (Indian Medical Gazette) gives his plan of treatment. Many of the cases reporting sick with this disease were found to have enlarged spleens—a legacy of old-standing malarial infection. From all these, and from any other doubtful cases, blood-smears were taken and sent for examination for the malarial parasite: they were subsequently put on quinin, 10 grains, so as to be on the safe side. The quinin did not in any way shorten the fever.

Aspirin and phenacetin relieved the body pains and headache most effectivety. Liquor morphinæ in frequent small doses had to be given in one or two cases in which the former failed, or to control vomiting. The rountine treatment adopted was;

1. Initial purge.
2. Rest in bed, with light diet.
3. Diaphoretic mixture and aspirin, 5 grains, every four hours, when pains were bad.
4. Tonic mixture during convalescence.

Generalized Emphysema in Children.

Rivet reports two cases of this condition. The first was that of an infant seven and a half months old in whom an acute generalized interstitial emphysema complicated a bronchopneumonia. Death occurred. The second case was that of a four-year-old child in whom rupture of pulmonary alveoli occurred in the course of a severe bronchitis and laryngitis. The resulting emphysema involved the subcutaneous region of the upper part of the thorax and the base of the neck. The emphysema disappeared in eight days. In the treatment of this condition the author notes that compression of the affected area, and minute puncture of the skin with aspiration of the air have been advocated. But these procedures are associated with a risk of the emaphysema by allaying the cough and the dyspnea with hot formentations applied to the thorax, with inbalations of oxygen, and respiratory sedatives. In severe cases of interstitial emphysema in which the swelling is so excessive that there is a risk of sudden death, the author advises that puncture of the skin may be cautiously attempted.—Gazette des Hopitaux.

Serobacterins or Sensitized Bacterial Vaccines a Distinct Advance in Bacterial Therapy.

Bacterin or vaccine therapy, carried out by the use of killed bacteria, has now been successfully applied to the prevention and treatment of many infectious diseases. Clinical experience has proven beyond question that these products produce a degree of immunity which enables the person treated to resist infection and which is of great value therapeutically. The length of time required before the immune condition is present and the local and general reactions which sometimes follow the first and occasionally subsequent doses are, however, factors calling for improvement.

To remedy the first of these defects, experiments were made with mixtures of serum and killed bacteria, with the idea that by this means immediate passive immunity could be had, as well as a more permanent active immunity, but this procedure resulted in failure, as only a slight degree of passive immunity was secured and no active immunity whatever. Besredka attributed this failure to the excess of serum present in such mixtures, and for the preparation of his "sensitized vaccine" took advantage of the discovery of Ehrlich and Morgenroth that bacteria mixed with a serum containing specific antibodies unite permanently with such antibodies. After maceration in the immune serum for a sufficient time the sensitized bacteria are recovered by centrifugalization. The bacteria, with their antibodies attached, are then washed in the centrifuge with physiological saline solution until all traces of serum are removed. Careful complement fixation and animal tests are employed to make sure that proper sensitization has taken place, and finally the bacteria are made up into standardized suspensions for administration. Since the value of serobacterins depends on thorough sensitization, and the complement fixation test proves the extent to which this has taken place, this test constitutes a vital part of the technic.

Besredka claims that sensitized bacterial vaccines or "serobacterins" posses a great advantage over the bacterial vaccines now in common use, in that their action is far more rapid, and they produce no clinical or opsonic negative phase, and no local or general reactions. His researches have been confirmed by such prominent investigators as Marie, Remlinger, Dopter, Theobald Smith, Metchnikoff, Gordon and others, all of whom found that sensitization of bacteria confers upon them new properties which render them highly effective as vaccines, free from the defects of the ordinary bacterial vaccine and "possessing an action which is certain, inoffensive, rapid and lasting."

A large number of favorable reports have appeared on the value of serobacterins in the preventive and curative treatment of

ECTHOL INCREASES PHAGOCYTIC POWER.

PAPINE
(BATTLE)
IS HIGHLY EFFICIENT AS A SEDATIVE TO THE
BRONCHIAL MUCOSA

TRY IT WHEN THE USUAL EXPECTORANTS DO NOT GIVE PROMPT RELIEF. IT SOOTHES THE INTENSE IRRITATION ACCOMPANYING INFLAMMATION OF THE AIR PASSAGES.

USE PAPINE (BATTLE) IN PLACE OF THE CUSTOMARY OPIATES.

Battle & Co., Chemists' Corporation, St. Louis, Mo.

BROMIDIA OF ADVANTAGE IN FEMALE NEURASTHENIA

PAPINE IS A MOST SATISFACTORY ANODYNE

IODIA IN THE PREVENTION OF ANGINAL ATTACKS

such diseases as cholera, plague, typhoid fever, dysentery, streptococcic and pneumococcic infections, gonorrhea and even tuberculosis and rabies. Sensitized plague vaccine is now official in the French Pharmacopœia, sensitized tuberculin is coming into very general use in Germany and other European countries, and sensitized rabies vaccine, on account of the rapidity and greater certainty of its action, has been adopted as the official Pasteur treatment.

The underlying principle explaining the action of serobacterins, according to Besredka, is that the bacteria prepared by sensitization are rapidly devoured by the phagocytes, and this is the cause of the absence of unfavorable reactions following their use. The combining of antibodies and bacteria, outside the body disposes of a long-drawn-out preliminary process which, with the bacterial vaccines, must be done by the patient's body cells. In serobacterins, this combination of antibodies with the bacteria being already performed, their action is immediate and free from local and general reactions.

The action of serobacterins may be characterized as follows:

1. Certain—because the bacteria are already prepared for phagocytosis and intracellular digestion.

2. Rapid—an effective immunifying response follows the first injection in from 24 to 48 hours.

3. Harmless—Being saturated with antibodies, the serobacterins do not absorb any of those present in the blood of the patient, and consequently cause no opsonic or clinical negative phase. They are free from toxic action.

4. Permanent — Animal experiments prove that the immunity secured from the use of serobacterins or sensitized bacterial vaccines is more permanent than that following the use of bacterial vaccines.

The rapid production of active immunity marking the action of serobacterins is invaluable in both the treatment of disease and preventive immunization. In treatment of a patient infected with rapidly multiplying pathogenic bacteria, the prompt immunizing response should overcome the infection before it causes serious damage. In preventive immunization, especially in epidemics, advantage of securing immediate immunity should make the use of serobacterins almost obligatory.

Sensitization is a delicate and complicated procedure which can be successfully carried out only in especially equipped laboratories by experts of the highest type. The difficulties surrounding the preparation of sensitized vaccines have up to the present time prohibited their general use, and the production of this superior vaccine on a scale that will make its use possible in every-day practice marks an important step in bacterial therapy.

A very complete review of this most interesting subject appears in The Mulford Digest for December, and we suggest that any physician who has not received a copy of the December Digest containing this review should secure one.

A Few Examination Questions of Alabama State Board of Medical Examiners

ETIOLOGY, PATHOLOGY, SYMPTOMATOLOGY, AND DIAGNOSIS.

1. Give the etiology of mucous colitis.
2. Give the etiology of scurvy.
3. Give the pathology of endocarditis.
4. Give the pathology of abscess of liver.
5. Give the symptomatology of erysipelas.
6. Give the sympathatology of heat-stroke.
7. Give the diagnostic symptoms of pellagra.
8. Name one variety of pernicious malarial fever and give its diagnosis.

9. Give the diagnosis of diabetes mellitus.

10. Give the differential diagnosis between appendicitis and ovaritis.

PHYSICAL DIAGNOSIS.

1. Name points for observation in the inspection of the thorax.

2. Name points for observation in the inspection of the abdomen.

3. Give the varieties or kinds of respiratory (breath) sounds and the explanation of each (adventitious sounds not asked for, such as rales, for example.)

4. Give the varieties or kinds of voice sounds and the explanation of each.

5. Give the physical signs of bronchial asthma and their explanation.

6. Give the differential physical signs between a thoroughly compensating cardiac hypertrophy caused by mitral stenosis and one caused by aortic insufficiency, and the reasons for same.

7. Give the physical signs of pericarditis with considerable effusion and their explanation.

8. Give the physical signs of arteriosclerosis.

9. Give the method for the physical examination of the spleen.

10. Give the physical signs of a bladder distended with fluid.

(Optional, to be answered or not, as the applicant prefers): Make a diagnosis in the following hypothetical case: Right side—Absent movement; bulging intercostal spaces; absent fremitus lower three-fourths, increased upper fourth; flatness lower one-third; tympany middle and part of upper third, dullness remaining upper third; absent respiratory and vocal sound lower third; amphoric breathing and egophony middle and part of upper third; bronchial breathing and bronchophony remaining upper third; succussion positive. Left side—Exaggerated movement and respiratory sound and apex of heart to left of mammary line.

OBSTETRICS.

1. What changes take place in the circulatory apparatus of the fetus after birth?

2. What conditions may be mistaken for pregnancy?

3. How would you diagnose the death of the fetus in utero?

4. What are the results of retroflexion of the gravid uterus with incarceration?

5. What are the premonitory symptoms of eclampsia?

6. What precaution should be taken in the management of face presentation?

7. What precautions should be taken against septic infection during labor and in the puerperal state?

8. Describe the internal method of performing podalic version and what are the dangers to the fetus?

9. (a) Give the diagnostic points of value in breech presentation prior to rupture of the membranes. (6) Name and describe positions of breech presentation.

10. Describe briefly the operation of cesarean section.

GYNECOLOGY.

1. Give the etiology of metrorrhagia.

2. Give the effects of oophorectomy.

3. Give the names of the two most important muscles of female perineum.

4. What is meant by fibrosis of the uterus?

5. Describe the endometrim.

6. Name the conditions that cause sterility in the female.

7. What pathological conditions are caused by posterior displacement of the uterus?

8. Classify tumors of the uterus.

9. Describe one operation for procidentia uteri.

10. Give the contraindications for cur ettage.

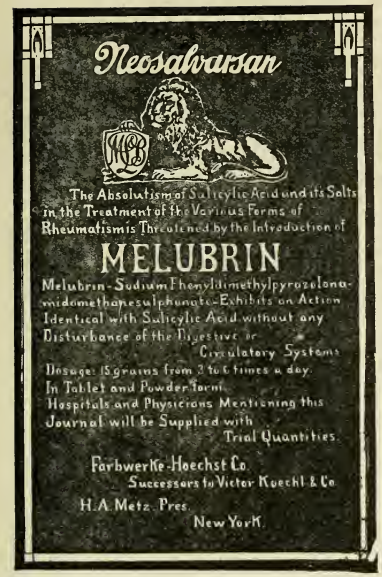
Treatment in Dyspepsia

Wilcox points out that in the treatment of chronic gastritis, careful attention should be paid to the condition of the mouth and teeth. Rest in bed for about a fortnight is advisable if the symptoms are severe, and during this period it is well to carry out gastric lavage daily. Five ounces of citrated or peptonized milk may be given every two hours for the first three days. Later junket, lightly boiled or poached eggs, clear soups or jellies may be given in addition. The diet must also be carefully regulated after the patient gets up. Alcohol is to be avoided and smoking prohibited.

The author recommends the following prescription:

Liq. Strychninæ - - -	ℳiij
Acidi Hydrochlorici Dil -	ℳxiv
Tinct. Aurantii - - -	f. 3ss
Glyceritæ Pepsinæ - - -	f. 3j
Spt. Chloroformi - - -	ℳx
Aquæ - - - - -	f. 3j

In hyperacidity, rest in bed is advisable. An easily digestible diet should be prescribed and citrated milk or milk containing one dram of sodium bicarbonate to the pint should be freely given. The following mixture should be given one hour after meals:


Neosalvarsan
The Absolutism of Salicylic Acid and its Salts in the Treatment of the Various Forms of Rheumatism is Threatened by the Introduction of
MELUBRIN
Melubrin-Sodium Phenyldimethylpyrozolona-midomethanesulphonate-Exhibits an Action Identical with Salicylic Acid without any Disturbance of the Digestive or Circulatory Systems
Dosage: 15 grains from 2 to 6 times a day.
In Tablet and Powder form.
Hospitals and Physicians Mentioning this Journal will be Supplied with Trial Quantities.
Farbwerke-Hoechst Co.
Successors to Victor Koechl & Co.
H.A. Metz. Pres.
New York.

Bismuthi Carbonatis	-	grn. x
Magnesii	-	grn. x
Sodii Bicarbonatis	-	grn. xl
Aquæ Chloroformi	-	ad 3j

In some cases the taking of olive oil, a tablespoonful before meals, is of value. The patient should avoid spiced foods, condiments of all kinds, also soups and meat extracts.

Chronic atonic dilatation of the stomach is best treated by rest in bed for a few days; the stomach may be thoroughly washed out and emptied at the commencement, and then the patient fed with citrated milk to which beaten-up eggs are added. An ounce of liquid may be given every hour for the first twenty-four hours, and the quantity of liquid only gradually increased. When the stomach has contracted down, light, easily digestible solids may be given: but big meals must always be avoided. It is well to avoid taking liquids with the meals; these may be taken either an hour before meals or between meals. Abdominal massage is of value, and the following nerve tonic may be given:

Liq. Strychninæ	- - - -	℥ iv
Tinct. Cardamomi Comp.	-	f. 3ss
Acidi Hydrocholorici Dil.	-	℥x
Aquæ Chloroformi	- - -	ad f. 3j.

—Medical Press and Circular, London.

The Bacillus Abortue in the Tissues of Inoculated Animals.

Contagious abortion in cattle has been traced to the Bacillus abortus of Bang. Fabyan has demonstrated the presence of this organism in the milk of infected animals by means of guinea-pig inoculations. Special importance is attached to the fact that the lesions in guinea-pigs, which take several weeks to develop, resemble those of tuberculosis, and, unless further examined, might easily be mistaken for the disease. Grayish foci appear in the liver and spleen, and the latter may be enlarged. In the testing of milk for the presence of tubercle bacilli, the possible occurrence of this organism must be borne in mind. So far, no instances of the occurrence of the abortion bacillus are recorded for man. Fabyan has also found that the bacilli may remain in the tissues of inoculated laboratory animals for periods of over a year without producing microscopic evidence of their pres

the number recoverable progfessively diminishing as time goes on.

The Virus of Variola and Vaccinia. - Ashburn, Vedder and Gentry (Philippine Journal of Science) discuss in a very interesting way the possible nature of the virus in these two conditions. Starting with the basic facts that the variola of man, after a comparatively few passages through animals, loses its power to produce, when returned to man, a highly contagious, generalized disease of considerable mortality, and that this power, once lost, is never regained, they postulate two possible explanations. The first is that, by passage through lower animals, the germ loses (acquires) certain properties and transmits its altered condition to its offspring. The other is that smallpox is due to a dual and divisible virus, one part of which causes vaccinia and the specific smallpox eruption, the other part being necessary for the production of the contagious, generalized, mortal disease with a distinct preeruptive stage and initial rashes. They dismiss the first hypothesis suggested on the ground that the transmission of acquired characteristics to offspring, implied in this view, is not in accord with the general biological law governing hereditary transmission. They quote many interesting observations and authorities in support of the presence of a "dual virus.." The first analogy is with swine fever, in which we have an ultravisible virus and an associated coliform organism. Dog-distemper and scarlet fever are suggested, with Petrie and O'Brien's guinea-pig epizootic, as having a similar etiology. The street virus of hydrophobia and the fixed virus of rabbits they hold to be the equivalents of variola and vaccinia respectively, and quote support for this view. Further, as regards smallpox, cow-pox, horse-pox, sheep-pox and swine-pox, they point out that there seems to be a pock-causing element common to them all and mutually protective amongst them, and yet smallpox and sheep-pox, highly contagious and mortal diseases in their respective natural hosts, are not transferrable as such. There would thus seem to be a pock-forming virus, common to these various diseases of man and animals, and, associated with it in a symbiotic fashion, another virus specific to particular species only, and eliminated in the course of a few transmissions in another species, so as to leave the pock-making virus alone. That another unquestioned virus may be contained in vaccine material they have shown in the case of a Luzon bovine inaculated with rinderpest as well as vaccinia. Experiment showed the preseuce of both rinderpest and vaccinia viruses in the pocks. We may add to this the danger always carefully guarded against of contamination of vaccinia material with the virus of foot-and-mouth disease and also, we believe, the successful transmission of the virus of infantile paralysis to monkeys, after it had been artificially added to vaccinia material. Smallpox they consider to be due to a virus AB; A is mainly responsible for the "toxic fever" and "toxic rashes" and B for the focal eruption and vaccinia. A third factor may be superadded, viz., the action of bacteria such as streptococci and staphylococci. In conclusion, mention may be made of a case reported by the authors of a man almost on his death-bed from sprue. Being exposed to variolous infection, he was vaccinated. About a week later a generalized eruption (probably post-vaccinal) appeared, after which a rapid recovery from the sprue followed.

Ovarian Grafting.

The followinfi conditions are regarded by the author as essential to the success of a grafting operation: (1) Absolute asepsis and the avoidance of strong antiseptics which would destroy the vitality of the tissues. The apparent contraindication to this in the case of chronic pyosalpinx and salpingo-oophoritis is met by the fact that the pus in such cases is usually sterile, and the tissues may be treated as surgically clean. (2) The employment of minute or "seedling" grafts. (3) The presence of a good vascular supply in the tissue used as the bed for the graft. Muscle is entirely satisfactory for the purpose. (4) The ovarian tissue should be left in contact with the body fluids within the peritoneal cavity until it is required for the grafting. In the case recorded in the author's paper the ovary was placed in Douglas' pouch until the time arrived for closure of the abdominal wound.

An important use for the grafting operation is as a conservative measure when it is necessary in a young woman to remove uterine appendages for old-standing inflammatory disease, without having to sacrifice the uterus. Another possible indication is that of transplanting fragments of ovarian tissue in cases of severe dysmenorrhea, where, in performing oophorectomy, it might be possible to bring about a cure without at the same time unsexing the patient.—B. Whitehouse, British Medical Journal.

The Treatment of Brain Tumors and the Indications for their Operation.— Cushing (Neurologisches Centralblatt) says that because of the great improvement in the technique of brain surgery there are few

cases of brain tumor that one would hesitate to operate. In general, radical operations are to be performed in those cases in which apart from the localization, the results depend upon the pathological nature of the growth and its behavior towards the surrounding tissue. With regard to the latter viewpoint, one distinguishes two groups, first, sharply circumscribed tumors. which press upon the brain substance without growing into it—sarcoma endothelioma, fibroma, angioma, cholesteatoma, dermoid tumors of the pia, solitary tubercles, gummatous growths and finally cysticerci and echinococci; and, second, infiltrating tumors—glioma and carcinoma metastasis. For a favorable outcome in the first group, the location is all important, whether extra or intracerebral. The prognosis in tubercle, gumma and cysticerci is unfavorable because of the multiplicity of their appearance. The prognosis in the second group is still worse because in an infiltrating growth the border is difficult of recognition. Endothelioma, sarcoma and neurofibroma offer the best opportunity for surgical success, and next comes cysticerci and echinococci which are diagnosed early. Tubercles are found most often at an early age and accompanied by general symptoms. Cholesteatoma, lipoma, dermoids, teratoma and angioma also occur most frequently in young persons. The location in the posterior cranial fossæ, in addition to their presence in the skin, speaks in favor of fibroma. Parasitic growths may often be recognized by lumbar puncture. Localization can best be made in tumors of the central convolutions, the pons and posterior and middle cranial fossæ, also, in the region of the speech centres and cerebellum. Apraxia speaks in favor of localization in the corpus callosum, while word blindness indicates the right temporal region. When the right frontal region is involved, a diagnosis is often impossible. When the tumor is situated in the brain stem, corpora mammillar, pons, medulla and third ventricle operation is contraindicated. In all other cases operation is to be recommended, although the percentage of complete recoveries is only 3 and 4 per cent.

Management of Breast Feeding.—Naish in The London Lancet, says that few mothers understand that the baby's cry during the first two or three days, before the flow of milk has become established, is not a cry of hunger but a natural process for the full expansion of the lungs; consequently they are worked up into a state of feverish anxiety. A vicious circle thus results, the nervous condition affecting the milk supply unfavorably. Many babies will struggle and scream for long periods before they will nurse effectively. The aversion is sometimes distinctly unilateral. The baby should be laid across the mother's body and a pillow placed under the arm that supports the child's head. The finger placed in the baby's mouth acts a stimulus to sucking, and by rapidly withdrawing it and substituting the nipple the opposition of the child may with patience be overcome. The afterpains brought on by the baby sucking during the ffrst two or three days are sometimes intense. An assurance that this pain is really beneficial in helping the organs to regain their normal size again is a great comfort and removes one more hindrance to lactation. Some people have scoffed at the careful arrangement of hours for feeding. There can be little doubt that it is best to let the baby have its meal at what is evidently the optimum time of secretory activity. The milk flows from the breast very quickly during the first two or three minutes; it comes out in several strong jets at this time, while during the latter part of the sucking period the flow is very slow. This vigorous flow may irritate the back of the child's throat and cause it to choke, so that it begins to scream and refuses to suck. The crying of the baby is often taken as an indication of deficient supply of milk. The simplest way of investigating this is to give

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the child a test feed by weighing it before and after a meal on sensitive scales. The writer carried out a series of test feeds on one baby during the first month of life, testing almost every meal during this period, and was unable to find any relationship between the amount taken and the amount of crying between the feeds. Suckling a child is associated with distinctly nervous phenomena. Insanity has a tendency to appear at such times, and the lesser grades of insanity merge into what is a very usual condition, hyperexcitability. A headache which comes on with greater intensity when the mother tries to go to sleep, and which effectually prevents sleep, is quite common. It is often easily controlled by phenacetin and caffeine. Rest is most essential. Bromides at night will enable the mother to get to sleep again quickly if she is aroused to feed the baby. There are certain periods when the milk tends to fail and when it is particularly easy for weaning to take place. These danger times are the ninth day, third and sixth weeks, and the beginning of the third and fourth months. At these periods exercise, fresh air, sleep, etc., should be insisted upon.

Congenital Chondrodystrophy.—Wagner (Arch. f. Gynak.) publishes a report on a case of this kind in which a direct inheritance from mother to child could be demonstrated. The mother was under clinical observation since her tenth year and presented well-marked clinical evidences of chondrodystrophy including excessive muscular development, regular dentition in contrast to rickets, characteristic brachycephalic shape of the head, short extremities without bowing and enlargement of the hypophysis with normal or prematurely ossified centers, short thick diaphysis and a normal length of the trunk. The pelvis was that of the type described by Breus and Kolisko. The disease is generally transmitted to the father, although in this instance the mother was affected. He says that the condition is due to two causes, either we are dealing with an inhibition of the normal bone formation as the result of disturbances in the endocranial glands, especially the primitive genital glands, or a muscular interference of the growth of the long bones results from excessive muscular effort which is brought about by hypertrophied development of the musculature as the result of a hyperfunction of the genital glands.

Ovulation, Corpus Luteum and Menstruation.—Ruge (Arch. f. Gynak.) reports his observations in a series of 106 cases in which the uterus and adnexa were removed. He finds that ovulation and the formation of the corpus luteum stand in a well-marked close association with the cyclic changes in the uterine mucosa. The rupture of a follicle and the beginning of the development of the corpus luteum take place during the first fourteen days counting from the beginning of menstruation. The stage of vascularization is combined with the premenstrual changes in the uterine mucosa. The full development of the corpus luteum extends to the beginning of menstruation. The retrogressive changes in the same usually start with the beginning of menstruation and are closely connected with the interval stage to the mucous membrane of the uterus. Full development of the corpus luteum and freshly ruptured follicles were not observed in any case and one apparently excludes the other.

Nervous Syphilis.—Cazenavette, (New Orleans Medical and Sugical Journal,) Says that in the treatment of syphilis of the nervous system it is often of great neeessity to produce rapid mercurialization in order to stay the ravages of the disease as promptly as possible.

To this end the method of administration which appeals most strongly is the intramuscular injection method, because it affords an accurate means of administration of the drug, because it is at all times under the control of the physician, eliminating such factors as forgetfulness or indifference on the part of the patient, and furthemore because it affords a means by which the intensity of the treatment can best be controlled.

The intensive form of treatment used is composed of the following formula:

Hydrargyri biniodidi - -	gr. v
Potassii iodidi - - -	gr. v-x
Olei olivarum - - - -	3j

Macerate first two and add a few drops of water. Then add oil and sterilize thoroughly. Dose: From 10 to 20 drops. or from 1-10 to 1-5 grain of biniodide of mercury.

A modification of the above formula follows:

Mercury biniodidi - -	grs. vijss
Castor oil - - -	3jvss
Olive oil, q. s. - - -	ad. 3j

Place in porcelian dish and keep on water-bath, and when clear sterilize thoroughly. The dose is from 10 to 20 drops, of from 1-10 grain to 1-5 grain of biniodide.

The injections were made by means of a hypodernic syringe, a needle of large caliber being substituted for the ordinary hypodermic needle. This is necessary, because it is impossible to suck up the oil through the ordinary needle. The large caliber

needle should be long enough to reach through the skin and subcutaneous fat, as it is essential to enter the muscle. It is needless to add that the utmost care should be taken in sterilization of the needle before use.

The site of the injections has been in the buttock well above the tuberosity of the ischium, the other buttock serving for alternate doses.

Although pain and local irritation have been the chief objections to this form of treatment, the patients treated have not complained of any unusual pain during or following the injection, and have all borne the treatment well.

The usefulness of good Hypophosphites in Pulmonary and Strumous affections is generally agreed upon by the Profession.

We commend to the notice of our readers the advertisement on page xiv of this number, "Robinson's Hypophosphites" is an elegant and uniformly active preparation; the presence of quinine, strychnine, iron, etc., adding highly to the tonic value,

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Treatment of Pulmonary Emphysema.

In addition to the usual treatment of the asthmatic paroxysms in pulmonary emphysema accompanied by asthma and chronic bronchitis, S. I. de Jong recommends the following solution to be sprayed in the nose:

Atropinæ Sulphatis	grn. ij
Sodii Nitritis	grn. ix
Glycerini	f. 3ss
Aquæ Destillatæ	ad f. 3ss

The regular treatment which this spray is to supplement may consist in injections of morphine or inhalations of ethyl-iodide or the fumes of stramonium.

If there is evidence of cardio-renal weakness the spray should be used with caution and a solution of eucalyptol in glycerin may be used instead. Insufficient expectoration in the intervals between paroxysms is a difficulty often encountered. For this condition the author recommends sulphurated antimony with or without tincture of lobelia. Potassium iodide seems to induce excessively copious expectoration and gastrointestinal disturbances but may occasionally be found useful especially in the obese.

When the secretory flow is excessive at the close of periods of dyspnea, terpin hydrate is valuable. Other measures that have been recommended are the administration of ergot or of certain mineral waters rich in sulphur.

When the emphysema is complicated by infectious diseases, digitalis, sparteine, Dover's powder, camphorated oil, and subcutaneous injections of oxygen are useful. When there is arteriosclerosis and chronic nephritis ihe author advises rest in bed, mild saline purges, milk and salt free diet, theobromine, caffeine and small intermittent doses of digitalis.—Jour. de med. de Paris.

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Meningeal Hemorrhage During Parturition.

Euziere and Bonnet report the case of a primipara aged twenty who during the course of labor passed into a deep coma, which gradually disappeared after the instrumental delivery of her child. The following signs indicating meningeal involvement were present: Rigidity of the neck, Kernig's sign, headache, photophobia, and a moderate rise of temperature. Lumbar puncture revealed bloody fluid. Complete recovery ensued in four weeks.—Gazette des Hopitaux.

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Mumps.

The blood in mumps shows definite changes in the corpuscular content consisting (a) in a slight increase in the total number of leucocytes, and (b) in a lymphocytosis which is both relative and absolute. The lymphocytosis is present on the first day of the disease and persists for at least fourteen days. The occurrence of orchitis doef not invariably alter the blood picture. The blood changes are of distinct diagnostic value in differentiating mumps from other inflammatory swellings of the parotid or submaxillary salivary glands and fromcases of lymphadenitis. A lymphocytosis of the cerebrospinal fluid occurs when mumps is complicated by meningitis or by lesions affecting the cranial nerves. It has, however, also been found in cases of mumps which have presented no clear clinical symptoms of any organic lesions of the nervous system. From a consideration of the blood and cerebrospinal fluid, one is justified inassuming that the virus of mumps excites an inflammatory reaction, the characteristic feature of which is a great aggregation of lymphocytes.—Feiling, in The London Lancet.

Table of Contents for January, 1914.

Original Communications.

A Comparative Review of the Progress in Clinical Diagnosis During the Past Half Century, by Dr. R. M. Reid, Gastonia, N. C., ... 1
Surgical Anesthesia, by Dr. L. A. Crowell, Lincolnton, N. C., ... 4
Intubation in Membranous Croup, by S. A. Wilkins, M.D., Dallas, N. C., ... 5
The Medical Man of Yesterday, Today and Tomorrow, by Bittle C. Keister, M.D., Roanoke, Va., ... 6
The Necessity of More Careful Diagnosis in Surgical Cases, by Robert L. Gibbon, M.D., Charlotte, N.C. 11
Diagnosis of Duodenal Ulcer, by Henry Norris, M.D., and M. H. Biggs, M.D., Rutherfordton, N. C., ... 12
Intestinal Auto-Intoxication: Its Etiology with Report of a Case, by J. Rush Shull, M.D., Cliffside, N. C., ... 15
Two Cases of Injury of the Eye, by Dr. John Hill Tucker, Charlotte, N. C., 18
Surgical Europe and Great Britain, by C. M. Strong, M.D., Charlotte, N. C., .. 19
Medical Inspection of Rural School Children, by Roy K. Flannagan, M.D., Richmond, Va., ... 22
A Peculiar Case, by T. M. McCoy, M.D., Mount Holly, N. C., ... 24
Pellagra and Pellagra Sine Pellagra. What Is It? by C. G. Roehr, M.D., Fort Pierce, Florida, ... 25

Editorial.

Effect of Pain and Shock on Operative Mortality, ... 27
Local Anesthesia, ... 27
The Treatment of Pulmonary Tuberculosis, ... 28
Editorial News Items, ... 29

Book Notices.

International Clinics, edited by Henry W. Cattell, A. M., M.D., ... 34
Genito-Urinary Diseases and Syphilis, by Edgar G. Ballenger, M.D., ... 34
Fundamentals of Farming and Farm Life, by Edwin Jackson Kyle, B.S., ... 34
The Surgical Clinics of John B. Murphy, M.D., ... 35
Diseases of the Kidneys and Nervous System, by A. S. Blackwood, B.S., M.D., .. 35
Materia Medica, Pharmacology, Therapeutics and Prescription Writing, by Walter A. Bastedo, M.D., 35
Progressive Medicine, edited by Hobart Amory Hare, M.D., ... 35
Text-Book of Physiology, by William H. Howell, M.D., 35
Dorland's American Illustrated Medical Dictionary, by W. A. Newman Dorland, M.D., ... 35
Principles of Surgery, by W. A. Bryan, M.D., ... 36
A Text-Book of the Practice of Medicine, by James M. Anders, M.D., ... 36
History of Medicine, etc., by Fielding H. Garrison, M.D., ... 36
The Treatment of Rheumatic Infections, ... 37
What Heart Patients Should Know and Do, by Wm. Francis Honan, M.D., ... 37
The White Linen Nurse, .. 37
How to Take Care of the Baby, by Dr. Francis Tweddell, ... 37

Abstracts.

Treponema in the Brain of General Paralytics. ... 38
A Clinical Study of 100 Cases of Pneumonia, ... 38
Spinal Anesthesia by Tropacocaine, ... 39
Radium in the Treatment of Malignant Disease, ... 39
Vaccines in the Treatment of Chronic Bronchitis and of Asthma, ... 40
Treatment of Tenia by Thymol, ... 40
Treatment of Hematemesis, 41
The Technic of Suprapubic Prostatectomy, ... 41
The Use of Short Incisions in Radical Operations for Inguinal Hernia, ... 41
Operation for Perforative Typhoid Ulcer, ... 42
Treatment of Flatulence, ... 42
The Invention of Spectacles, 43
Is Any Illness in Infants Due to Feeding, ... 43
Idiopathic Epilepsy in Children, ... 44
The Treatment of Umbilical Hernia in Infants, ... 44
Confirmed High Blood Pressure, ... 44

Partial Chronic Adrenal Insufficiency in Children.

The author points out that there may occur in childhood, either spontaneously or as a sequel of some acute disease, slightly marked but persistent disturbances which at length react seriously on the general state and growth of the child and which are due to partial insufficiency of the adrenal function. In very young children thus affected, development in weight and height is at a standstill, the muscles are flabby, walking is delayed, and the child is apathetic and at times somnolent. Adrenal therapy or the simple administration of small doses of epinephrin bring about more or less rapid cessation of these manifestations. In somewhat older children retarded growth in height is the most marked phenomenon. In boys, before puberty, there is noted a condition of apathy, fatigue, and physical and mental indolence. The child grows thin and the blood pressure is low. Administration of adrenal preparations under these conditions renders the boy more alert and leads him to work better and suffer less fatigue; the blood pressure rises and the body weight and stature augment in a few months. Manifestations such as those described may, of course, be due to other conditions, but the benefit accruing from adrenal therapy in many cases would seem to indicate a specific deficiency on the part of the correspondidg organs.—D'Œlsnitz, Presse medicale.

Transthoracic Intrapulmonary Injections in the Treatment of Pulmonary Tuberculosis.

Rosenthal alludes to the recent work on this subject by Vincenzo d'Amico, who believes that this is the only true method of treatment of pulmonary tuberculosis. The method consists in the introduction into the substance of the lung of a fine irridium pointed platinum needle 3 to 3 centimeters long. Through this needle there are injected into the diseased focus 1 to 2 cubic centimeters of the following solution:

℞ Iodoform, 1 gram.
Camphor, 2 grams.
Guaiacol, 5 grams.
Essence of peppermint, 30 drops.
Olive oil, 20 grams.

D'Amico is said to have obtained good results with the use of this method in the treatment of twenty cases of pulmonary tuberculosis.—Bulletin General de Therapeutique.

The Danger of Combining Morphine with General Narcotics and Hypnotics.

—Straub (Munch. med. Wochenschr.) calls attention to certain danger in this procedure. In a case where chloroform was given after a preliminary injection of morphine for a minor operation, death resulted from respiratory paralysis, although the general narcosis was not a deep one. By means of experiments in rabbits it was shown that the slowing of the respiration remained for several hours after the injection and if a general narcotic or hypnotic had been administered, this rate was further diminished.

The Experimental Production of Pernicious Anaemia in Rabbits.—Adler (Journal of Medical Research) as the result of the researches of Faust and Tallquist into the hæmolytic substance in the head of Bothriocephalus latus, which they found to be oleic acid, has carried out some feeding experiments on rabbits. He found that fat in the form of olive oil or cotton-seed oil was toxic to these animals, this effect depending on the content of unsaturated fatty acid. Blood crises were produced resembling those of pernicious anæmia, together with extreme emaciation. The anæmia was apparently due to a destruction of red cells in the blood vessels of the abdominal organs rather than to a direct effect upon the bone-marrow. In fact, this destruction seemed to stimulate the bone-marrow, so that high blood counts were met with. Long continued feeding with non-toxic doses of quinine protected rabbits against the fat intoxication.

Experimental Studies in the Physiology of the Hypophysis.

Schlimpert's experiments in the ear of the rabbit have proved that the pituitary bodies, especially the posterior lobe, of pregnant cows, show no increase over those of non-pregnant cows. Hypophysin is only in the posterior lobe and not in any other part of the brain, and especially not in those parts which are similar in their development to the pituitary posterior lobe, the tuber cinereum and its surroundings. Hypophysin could be found in the 10 week's embryo of the cow and in a 6 months' human fetus, through its vasoconstrictor effect in the ear of the rabbit. From the 28th week on the same could also be demonstrated in the embryo of the cow through the breathing effect.—Zentralblatt f. d. ges. Chir. u. ihre Grenzgebiete, Bd. III, Heft 3, 1913.

Special Anniversary Number of the American Journal of Clinical Medicine.

The American Journal of Clinical Medicine with its January issue celebrates its coming of age. With this issue it begins its twenty-first volume. This number contains many notable articles, among them papers by Dr. G. Frank Lydston, on the Treatment of Syphilis; Dr. E. A. Fishkin, on the Wassermann Reaction; W. J. Robinson, on the Treatment of Venereal and Sexual Diseases; B. G. R. Williams, on Laboratory Tests and their Therapeutic Significance; Arthur M. Slee, on Sterilization; George H. Candler, on Making Good in Medical Emergencies; Ralph St. John Perry, on Making Good in Surgical Emergencies; Charles Gilbert Davis, on The Conflict of Conscience; and many others. This number will be profusely illustrated and promises to be one of the most handsome medical magazines ever published in this country.

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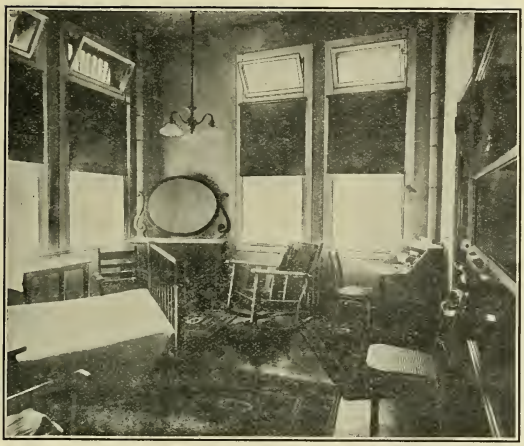
Nurses laundry during the course must not exceed twenty-four pieces per week. This includes two uniforms, seven aprons, four kerchiefs, one white plain shirtwaist, and one whirt skirt.

Suggestions to Patients:

Patients are advised to have some understanding with their physician, surgeon, or anesthetist as to what his charges will be.



A Patient' Room.

For general information, address
Dr. Edward C. Register
President Charlotte, N.C.
or
Dr. W. O. Nisbet Chairman of Executive Committee Charlotte, N. C.

For further information concerning the training school, address Superintendent of Nurses Charlotte Sanatorium Charlotte, N. C.

Doctors' Reading and Lounging Room:

A large room on the third floor is fitted up for the special use of visiting doctors. Here they will find a very comfortable place to rest and discuss the various cases. Plenty of interesting literature is available, if it is desired to pass away any waiting hours. Doctors having patients in the Sanatorium. or just visiting, will be expected to make themselves at home. Visiting doctors from out town, especially, will find the building most centrally located, and it is hoped that they will make it their headquarters as long as they are in our city. Any member of the profession will be welcome to visit the Sanatorium at any time.

Rates for Rooms:

There are several large rooms, with three or more beds, at $2.00 per day, which will include board room, and general nursing, and such medicines as are kept in the Sanatorium. Prescriptions and special medicines will be extra. These rooms are very large and comfortable, being well lighted, with plenty of space on all sides. Those patients who enjoy company will find these beds all that could be desired.

Doctors' Private Room.

Two-Fifty per Day:

At $2.50 per day, there can be had private rooms, which are very comfortable in every way. These are well located and very accessible, and make very pleasant places to stay.

Three Dollars per Day: There are a number of rooms at $3.00 per day, which are well finished in every way, and when the patient wishes to be very private they are most desirable.

Four, Five, and Six Dollars Per Day:

These rooms are the most select in the building, have private baths attached, and are elegantly finished. They will be found to be as comfortable as the most axacting patient could wish, being handsomely furnished, with tiled baths, having an outside exposure, with plenty of light and sunshine. They must be be seen and used to be appreciated.

A Reception-Room.

The prices for all the various rooms include board, general nursing, and ordinary medicines, Prescriptions, special medicines. special nursing, laboratory examinations. hydrotherapy, and doctors' bills will be extra.

Special Nurses: Patients desiring a special nurse can get one at any time. Nothing is more helpful and comforting to a sick person than a special nurse, and if a patient wants one it will be very easy to have one here. The minimum charge for a Sanatorium special nurse is $2.00 per day. Graduate nurses not in the employ of the hospital can be secured at $25.00 per week, or $3.50 per day. Of course, it will be only exceptional cases that will need two.

Ladies' Sun Parlor.

The Sanatorium will send out nurses on private duty at any time. Rates, $2.25 per day and expenses for pupil nurses $3.50 per day and expenses for graduate nurses. Phone or telegraph when you need a nurse, and one will be sent promptly on train.

Use of The Operating Room: Surgical cases, requiring operations, will pay $5.00 for the use of either of the operating-rooms, and this includes dressings and solutions.

Courtesies to the Medical Profession: While the Charlotte Sanatorium is an institution owned and managed by its stockholders, its policy is liberal and at all times courteous to physicians and surgeons in Charlotte and the surrounding country. Special attention will be given to patients treated by the physicians and surgeons who are not officially connected with the institution.

DUFFY'S PURE MALT WHISKEY

A medicinal whiskey made especially to comply with the test requirements of the United States Pharmacopeia, the fusel oil being largely removed in the process of refining. It acquires smoothness and body without absorbing tannic and acetic acids and tar products by being aged in especially prepared barrels.

We request the careful attention of physicians to the medicinal properties of Duffy's Malt Whiskey. Used as directed it will be found invaluable when a tonic stimulant is required,

A post-card addressed to the

THE DUFFY MALT WHISKEY CO.,

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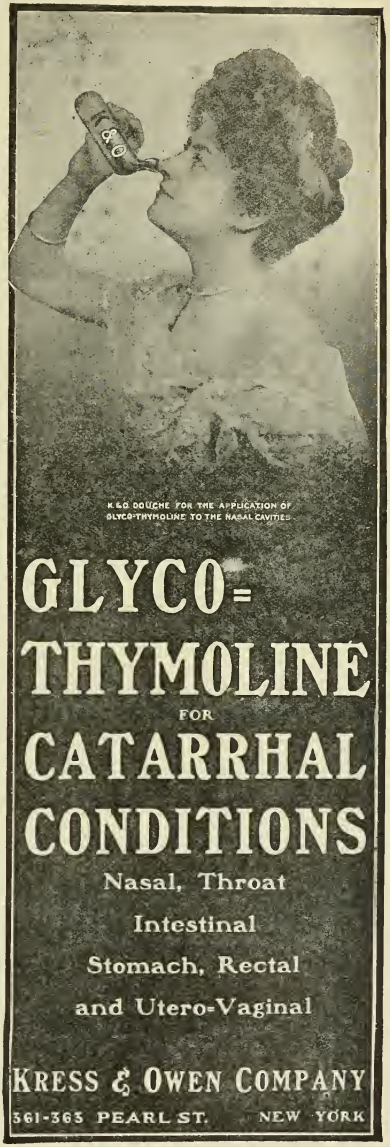
will bring a special container with samples for office use.

Pathology of Shock.—Henderson does not agree wholly with the Crile school as to the nature of this phenomenon. He believes that shock is a collective term and that we should study its individual phases. Sudden deaths were once supposed to be shock deaths, and while the mechanism was usually visible there was in many cases no trauma. Anaphylaxis to-day explains some of these instances. Psychic shock leading to death is also partially understood. Sudden death from electricity is commonly spoken of as due to electric shock, although these deaths may differ much among themselves. Death in chloroform narcosis (chloroform death) is regarded as due to a cardiac shock. Death from drowning is more or less a shock death, in cases in which resuscitation is impossible even after but two or three minutes of immersion. For the gynecologist shock is the result chiefly of hemorrhage; for the surgeon shock means a strong depression of all, of life's functions not conditioned by loss of blood; for the military surgeon shock is due largely to the depression produced by prolonged operations. The phenomenom of acapina is discussed very fully and it is questioned whether or not it should be included under shock. It at least seems to be visible in the course of certain shock deaths. This relationship will doubtless be a great problem for the future. The relation of various functions to shock constitute problems of equal significance. Thus the question of circulatory shock must first involve the status of each structural component as venous pressure, the blood supply of the right heart, the influence of the nervous system (vasomotor). The venous pressure is not disturbed by an injection of



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adrenalin which causes a marked rise of arterial pressure. The author closes in recapitulation the extremely obscure nature of circulatory shock.—Munchener medizinische Wonchenshrift.

Papine in Pain.

The wide popularity of Papine (Battle) has logically followed as a consequence of its value as a prompt anodyne, and one that is free from most of the evil features attaching to morphine. When opiates become clearly necessary for the relief of pain in nervous women or children, physicians will find Papine (Battle) to be as effective as opium, and with the distinct advantage of being free from most of opium's disagreeable effects.

Chronic Intestinal Stasis.— Arbuthnot, Surgeon to Guy's Hospital, London, says I employed the term "Chronic intestinal stasis" to indicate such an abnormal delay in the passage of the intestinal contents through a portion or portions of the gastro-intestinal tract as results in the absorption into the circulation of a greater quantity of toxic or poisonous materials than can be treated effectually by the organs whose function it is to convert them into products as innocuous as possible to the tissues of the body.

Stasis of the small intestine with the associated infection of its contents by organisms to which it is unaccustomed is not primary but is secondary to a stasis in the large bowel.

In other words, if it were not for the presence of the large bowel the conditions producing stasis in the small intestine would not arise. If the caecum did not become overloaded the obstruction to the ideal effluent, either by an acquired mesentery, an appendix hitching it up, or by simple stasis would not develop. Consequently the contents of the small intestine would not become infected by organisms, the duodenum would not be blocked by the drag of the small intestines obstructed at the end of the ileum, the mucous membrane of the duodenum would not inflame and ulcerate, the biliary and pancreatic ducts would not be infected and obstructed outflow from the stomach, with all its associated sequelae, would not occur.

Now I wish to show that the extraordinary improvement that results from short-circuiting and the disconnection or removal of the large bowel is due largely to the fact that the evacuation of the small intestine is facilitated by its introduction into the pelvic colon, and that the infection of its contents by organism which grow in the stagnating material in the large intestine ceases abruptly. I do not wish to suggest that all absorption of toxine takes place from the stomach and small intestine, but I do maintain that the tract other than the colon plays a very important part, and I believe by far the most important part in the process of absorption. It appears to me that the point of greatest difficulty in the passage of material along the gastro-intestinal tract is through the last few inches of the ileum. This is particularly the case when the caecum has been securely fixed by acquired adhesions in the iliac fossa. In such cases the delay of the effluent at the pelvic brim may be very great; indeed, in one of my cases which Dr. Jordan has examined with bismuth and the X-rays, the material remained in the terminal coil of the ileum for as long as eighty-five hours without there being found at the operation any evidence of interference with the effluent by an acquired peritoneal band or by an appendix in such a position behind the small bowel as to control the passage of material through it in certain positions. Now this form of simple obstruction, which cannot be recognized at the time of the operation, and can only be determined by bismuth and X-rays, I call the "simple static variety." I use this term as opposed to the more obvious variety in which the bowel is controlled by an acquired band or by an appendix, either of which is readily recognized when the abdomen is opened, though the extent of its effect on the effluent can only be gauged by bismuth and X-rays.

Chronic Catarrhal Diseases.

Chronic catarrh never fails to indicate general constitutional debility. Local treatment is always desirable but for permanent results efforts must be directed toward promoting general functional activity throughout the body, and a general increase of systemic vitality. The notable capacity of Gray's Glycerine Tonic Comp. in this direction readily accounts for the gratifying results that can be accomplished through its use in the treatment of all chronic catarrhal affections, but especially those of the gastro-intestinal canal and respiratory tract. The particularly gratifying features in the results accomplished by Gray's Glycerine Tonic Comp. are their substantial and permanent character. This is naturally to be expected since they are brought about through restoring the physiologic balance of the whole organism.

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In the treatment of disease the element of uncertainty with special reference to individual idiosyncrasy, must always be considered, but the element of uncertainty as to the therapeutic action of a remedy can be eliminated providing ordinary care is exercised in selecting drugs or remedies which are not inert and have proven their efficiency.

For over 45 years, Hayden's Viburnum Compound has maintained its reputation as therapeutically efficient in the treatment of Dysmenorrhea, Menorrhagia, Post-partum Pains, Puerperal Convulsions and in pain resulting from spasmodic contraction

It is a well known anti-spasmodic and as it contains no narcotics nor habit forming drugs, no disagreeable after effects is the result of its administration.

Given in teaspoonful doses, administered in boiling water, it will not disappoint you thus eliminating the element of uncertainty, and as it is not a secret remedy, but a carefully compounded and ethical pharmaceutical, it will render most satisfactory results in those conditions wherein especially indicated.

Finding Favor.

Liquid soaps of many kinds have been advertised to physicians and used extensively by them for some years.

Most of the liquid preparations of this kind have had some merit and offered a convenient and serviceable adjunct for office use and the surgical case. For a new product of this kind to meet with favor something about it had to be distinctive. It necessitated doing away with the disagreeable features of other liquid soaps and yet preserving and improving the quality of the soap.

To begin with, a bottle of Lilly's Liquid Soap is "just right" in size, and it is constricted in the middle so that it can't slip from hands wet with lather. There is no label to become mussy. The plunger stopper keeps the sprinkler orifice from clogging, so that soap can be had without delay when wanted. The soap is colorless-water like in clearness. It contains no added antiseptics or germicides yet it is antiseptic as shown by bacteriological tests. While it is a powerful cleanser, (vegetable oil soaps possessing greater detergent properties than soaps made from animal fats) it is non-irritating to the skin. It is especially convenient for use in obstetrical cases and is designed primarily to meet the needs of physicians and surgeons, yet at the same time is well adapted to general toilet requirements.

A Reconstructive after Winter Diseases.

The unanimity of opinion among medical men in choosing cod liver oil as the reconstructive par excellence after diseases of the respiratory tract proves beyond doubt its value.

The only question which can arise in connection with cod liver oil's employment is the form in which to give it, and this question has been settled in the minds of those physicians who prescribe Cord. Ext. Ol. Morrhuae Comp. (Hagee). With this product the patient enjoys every advantage of the raw oil, but is spared its nauseating effects.

Safety and Efficiency of Typhoid Prophylaxis.

It is proven that the prophylactic vaccination against typhoid fever is without danger, that the protection is almost absolute, even under conditions of unusual exposure, and that the entire process of immunization may be carried out in the field, with the troops under canvas and while exposed to infection from local sources. It is also proved that the process of immunization can be carried out safely and successfully in civil life on the outbreak of an epidemic of the disease.—Major F. F. Russell, Medical Corps, U. S. Army.

A 32 page booklet "Biologic Products and How To Use Them" can be obtained on request from The Abbott Laboratories, Ravenswood, Chicago.

Vaso-Motor Derangements.

The part played by the vaso-motor system in countless diseases is at last thoroughly recognized. As a consequence, circulatory disorders are among the most common functional ailments that the modern physician is called upon to correct. Various heart tonics and stimulants are usually employed, but the effect of these is rarely more than temporary. To re-establish a circulatory equilibrium that offers real and substantial relief from the distressing symptoms that call most insistently for treatment requires a systematic building up of the whole body. Experience has shown that no remedy at the command of the profession is more serviceable in this direction than Gray's Glycerine Tonic Comp.

For nearly 20 years this standard tonic

The Charlotte Medical Journal

VOL. LXIX CHARLOTTE, N. C., FEBRUARY, 1914. No. 2.

The Clinical Diagnosis of Nerve Syphilis.*

By J. Allison Hodges, M.D., Richmond, Virginia, Professor Clinical Neurology and Psychiatry, Medical College of Virginia.

In this day of modern methods, serologic and cytologic tests for syphilis are almost a routine practice. It is often advisable, however, and even necessary, especially in syphilis of the nervous system, as you have frequently seen illustrated in these clinics, to make a clinical diagnosis as well, and it is to this phase of the subject that I invite your attention today.

In one lecture it is almost impossible to adequately define or assemble in concise form all of the diagnostic features of nerve syphilis, but it is hoped that sufficient data may be given to enable you as general practitioners to recognize the important, and unfortunately not uncommon effects of the treponema invasion upon the nerve structures, and properly diagnose it, whether it be intra-cranial, spinal or peripheral.

The nervous symptoms themselves are in no wise different when caused by a specific infection from those produced by other causes, but their method of development and their particular grouping, together with the fact that certain areas and localities are especially prone to be affected, are of decided value in aiding us to differentiate them from symptoms of similar affections not due to the virus.

If, of course, we have the actual symptoms of a recent syphilis, it is proof presumptive, if not indeed positive, that the nervous symptoms are due to that cause, but a history of past syphilis is of less value, and in the absence of marked clinical symptoms of a previous infection, the most interesting of diagnostic problems is furnished as to whether the existing nerve phenomena are a result of remote infection, or are the evidences of some disease that may have occurred independently in the course of a chronic affection.

Furthermore, the symptoms of nervous syphilis are almost coextensive with the symptoms of all nervous diseases, and consequently it is very difficult, because of the almost infinite variety of the lesions, to present a clear-cut picture of nerve syphilis, and yet the extreme frequency of the symptoms, as well as the importance of differentiating them as due to specific or non-specific causes, is, or should be, of vital interest to every scientific physician, for only in the early stages before sclerotic changes have occurred, are such affections usually amenable to treatment.

As has been stated in a former lecture, at least 10 per cent. of all the diseases of the nervous system are due directly or remotely to syphilis, and while any portion of the nervous system may be involved, yet in the majority of cases the symptoms are either lesions of the intra-cranial organs, or of the spinal cord. Lesions of the peripheral nerves are rare, syphilitic paralysis of a single nerve having been occasionally noted, but syphilitic polyneuritis has always been a much disputed subject. In all stages of the infection, the nerve structures likewise suffer from the direct effects of the microbic invasion, and recent investigations of Noguchi, Moore and others prove the presence of the specific organisms themselves in the nerve tissues. Fortunately, however, syphilitic affections of the nervous system have certain general characteristics that differentiate them in a way from similar affections not due to the virus, and we will accordingly proceed to consider them as referable to lesions of the intra-cranial contents, the spinal cord and the peripheral nerves.

Intra cranial syphilis may be suspected if there is present, or there is given a history of the following symptoms.

First. Headache (quasi-periodical), which is present in 75 per cent. of the cases, and which has certain definite characteristics, such as a tendency to return at a particular time in the twenty-four hours, usually at night, and less frequently in the morning or afternoon, and generally accompanied by an insomnia which is marked and notably present in the late hours of the night, and followed by more or less depression in the early morning hours.

This headache with its attendant features is almost invariably prodromal to the so-called early secondary stage of the disease, and is regarded as due to hyperæmia or distinct inflammation of the meninges.

Second. The sudden cessation of such a characteristic headache and insomnia upon the occurrence of paralytic or convulsive symptoms.

These paralyses or fugaceous palsies and fleeting sensory losses of early brain syphilis, with the exception of those of the cranial nerves, are most often due to thrombosis from arteritis, and more rarely to hemorrhage or gumma.

*Clinical Lecture delivered in the Memorial Hospital Amphitheatre, October 25, 1913.

Third. Lack of definite type in the development of the symptoms of any cerebral disease, whereby an odd mixture of somatic and psychic symptoms may be presented in a given case, such as pain or anæsthesia, spasm or irregular paralysis, or both, together with the sudden appearance or disappearance of one or all.

Fourth. Symptoms indicative of a lesion at the base of the brain, especially at that anterior portion in which lie the optic chiasm, the crura cerebri, the olfactory nerves and the third pair, whether preceded or not by the characteristic headache and insomnia.

The eye nerves are most frequently affected, and Von Graefe says that over 50 per cent. of all eye-muscle paralyses are syphilitic.

Church says that the almost constant presence of basilar gummy meningitis, with its consequent cranial nerve symptoms, such as ptosis, pupillary abnormalities and optic-nerve disturbances, is often alone sufficient to guide the diagnosis.

Fifth. Sudden attacks which appear without apparent cause and are transient in character, ranging from simple vertigo to temporary unconsciousness and convulsions in the adult (epileptoid attacks occurring after the age of thirty, or apoplectic attacks appearing before the age of fifty, singly or in combination), and which have not been preceded by convulsions in infancy, and which are not of traumatic or nephritic origin, or due to pregnancy, or the result of migraine.

Sixth. Progression of the disease by fits and starts, and caused by the involvement of successive vascular twigs in the brain.

Seventh. Alternations of somnolence and insomnia, or a peculiar or partial stupor extending over days or weeks, and which is not traumatic, meningitic, diabetic, nephritic, or due to typhoid fever.

Eighth. Hemiplegia in an adult under forty years of age, even when there has been no preceding headache and insomnia, or no probable sources of emboli from lesions of the heart, lungs or kidneys.

Ninth. Multiplicity of lesions, showing both brain and cord symptoms in the same patient, or double-sided brain lesions, or lesions of both base and convexity.

Sterility in male or female, and repeated miscarriages are often suggestive of general nerve involvement due to syphilis.

Spinal Syphilis usually affects the membranes of the periphery of the cord, and the clinical symptoms are generally those of a meningitis. The spinal cord is much less liable to be affected than the brain in early syphilis, but if affected, the clinical symptoms beginning with a meningitis, may become a meningo-myelitis, and terminate by focal softening or sclerosis, consuming many years in their development. These symptoms are those of changes due to degeneration of, or pressure on the nerve structures, and while, of course, they vary with the particular part of the cord that is involved, still they present the classical features of palsies or paralyses, anesthesias, sensory changes, pain, or the signs of tabes or paresis.

Unlike cerebral syphilis, spinal syphilis presents no characteristic premonitory stage, and in clinical features differs but little as far as individual symptoms are concerned, from similar lesions arising from any other source. The principal symptoms are pains and palsies, the former usually early in manifestation. severe in intensity and nocturnal in character, while the latter are rarely complete, thus combining frequently to make the diagnosis one of the greatest difficulty, unless there is positive knowledge of luetic infection, past or present. Nearly, if not every case, likewise, sooner or later, presents evidences of cerebral invasion, and the final diagnosis often depends on this association.

Syphilis of the peripheral nerves, or syphilitic neuritis, is an unusual clinical entity, and a syphilitic polyneuritis is practically unknown. In their clinical manifestations, the specific types of a simple syphilitic neuritis are not easily distinguishable from the non-specific forms, and to be exact in diagnosis, a clear history must be available.

In addition to the different forms of Nerve Syphilis already discussed, there may be a *diffuse cerebro-spinal syphilis*, which gives rise to a bewildering mixture of symptoms, the result of the multiform and often complex effects of the virus on the nervous structures, but those are cases more for the neurologist than the general practitioner.

The Great American Fraud—Patent Medicines, Quacks, and Guarantee Doctors.*

By I. W. Surratt, M.D., Sylvatus. Va.

The subject of my feeble paper is a familiar one. It has been thoroughly discussed from every viewpoint by every class and every profession from time immemorial, and yet, in the face of twentieth century enlightenment, at a time when education seems to have almost reached its zenith, when this great nation of ours boasts of its achievements in science, literature and art as never before, this Great American Fraud, as the American Medical Association has aptly called it, continues to sap the lean-

*Read before the Southwestern Virginia Medical Society at Marion, Va., January 7th, 1914.

ing walls of life by pretending to cure and brings its victims to an untimely grave by wasting the few precious days the poor victim has by keeping him away from honest, trustworthy and reliable medical attention at the hands of some worthy practitioner.

This infamous practice must be stopped. The laws of the United States should not tolerate it. Born at a time when our nation was young and unsuspecting, when the customs and fashions of "Ye olden times" were fresh in the minds of our people, when the practice of misrepresenting and exaggerating was the tendency of the times,this serpent of deception and promoter of evil has been nurtured, as it were, by its own victims, and grown corpulent, unwieldy and unmanageable, and when called upon to account for its nefarious work, raises its horrid, slimy coils before its pitiful and all but insane victims and pleads honest business, law abiding people, miraculous cures.

Yes, the honest business that prompts the tough in the slums of our cities to give his victim "knock-out drops" and then rob him of every penny he has, law abiding until the strong arm of the law reaches out and grasps the defrauder and says "Your period of probation is gone," miraculous cures that get well in spite of the opiate pills and alcoholic draughts with nothing said about the thousands that repose quietly beneath six feet of earth.

It is high time that our nation set the strong heel of authority upon the head of this defiant reptile and crush this terrible business out of existence, or at least relegate it to its proper channels and keep it in its own filthy domain.

The greatest enemy today of the afflicted ranks of humanity is the "Grinning quack," the "Boisterous cure-all," the "Long-faced guarantee physician," the "Wide-mouthed cancer doctor," the "Solemn make-believe consumption healer," and others too numerous to mention.

These various classes made their appearance during the age of the stump speaker, the practical joker, the spell binder, the magnanimous liar, the degenerate advertiser and their kindred classes, of which the quack, the patent medicine vender, and the guarantee doctor is a component part.

They are not only sapping the waning vitality of the invalid by delaying honest, conscientious treatment, but aside from this they are draining every penny possible from their suffering victims and at death leave the dependent ones to the cold, cruel charities of a merciless world.

It is a matter that the medical profession has ignored and disdained, relying upon the common sense and judgment of an intelligent public to soon see the error of their way and give a wide berth to the patent medicine vender, but, like the peanut peddler, they are on every street corner and every road crossing, crying in extravagant language the merits of their panacea for all the ills the human race is heir to, and it is no wonder that the unsuspecting patient, blinded by his own condition and grabbing at straws, continues to buy the flavored dope, continues on his road to the grave, only to have his place filled by others equally as ignorant and eager to be soothed by hypnotic drugs and stimulated by alcoholic-laden medicines, resting under the fearful deception that they are being cured, when, as a matter of fact, they are being hurried to their graves.

The medical profession must take the matter up. The curtain of darkness must be raised. A system of education and instruction must be outlined that will dispel the thick fog with which the quack intends to keep continually before his patient.

The thoughtful physician can hardly conceive how any one of ordinary intelligence can be induced to purchase a medicine of which he knows nothing and take it for a disease which he is unable to diagnose. Ignorant of its contents, blind to its effects and uncertain as to its results, he still further menaces his health and jeopardizes his life by taking it for some imaginary or deeply hidden disease of which he knows nothing. The advertisement says it is good for this and good for that, in fact, it is good for everything and their war cry is "Keep taking it." If one bottle doesn't cure, buy a dozen, and if that proves inefficient, invest in a gross.

I believe it is the duty of the medical profession to stem this tide of ignorance that is polluting the fountain of life and draining the finances of the invalid. To do this requires forethought, information and intelligent communication with your patients.

I do it in this way and only as opportunity naturally presents itself. Being frequently asked as to the value of some patent medicine I endeavor to enlighten my patient by asking him if he knows anything about the composition of the medicine or any of its active principles. He usually replies that he does not, and then I proceed to explain that it would be rather risky and decidedly second-rate medication to take something of which he was entirely ignorant as to composition, effects, and results.

However, the inquirer sometimes explains that not knowing himself was the reason he came to me, to which I invariably explain that I am not a patent medicine man and have nothing, whatever, to do with it, that I wouldn't analyze it if I could and had the time and opportunity, that it has no room

in my office and no place on my prescription. I then incidentally inquire for what disease he was going to take this medicine and upon receiving a negative answer, which is usually the case, I illustrate the futility and utter hopelessness of curing any disease by taking a medicine of which we know nothing for a disease of which we know nothing.

This colloquy usually robs the patent medicine vender of a victim and adds a number to the ranks of the educated public as far as nostrums and quacks are concerned.

It is our duty to ourselves, our fellowman, and our profession to do all we can to dispel as far as is in our power, the thick fogs of ignorance and deception relative to patent medicines. The physician is untouched and uninjured by these ingenious and deceptive advertisers. The burden falls altogether on the laity and I feel that we fall short of our duty, if we do not, as far as possible, endeavor to alleviate the tortures of the suffering millions and ease their burdens as much as we consistently can by explaining to them the rotten foundation and trashy framework of the patent medicine man.

The Autobiography of a House Fly.*

By C. B. Bowyer, M.D., Stonega, Va.

Zoologically speaking, I belong to the species Musca Domestica, a specialized family of the Diptera. Zoology now acquaints you with over thirty thousand distinct species of the Diptera. Human factors have disseminated us over the entire face of the earth. My family is represented everywhere; we are included in rare specimens of the Arctic explorer, and have been found in the most distant and desolate islands of the sea.

I was hatched, mid peace and plenty, in an old manure pen—as 80% of us are—in the Old Dominion State. Mother deposited one hundred and twenty eggs. In twenty-four hours we all hatched, but it being early spring, a lot of our family were a "reversion of type," quite dwarfish, and died of inanition. Fowls and ants "worked on us" in the grub stage, so only about twenty shed our slit skirts and greeted the world as full-grown flies. There is nothing of interest to relate about my life during the larva and pupal stages. I discarded my skin twice, had my picture made once, and operated a very fidgety and energetic life during the five days of my larva period. On the sixth day I was full grown, my last larval coat dried to form the pupal membrane, so I immediately transformed into the pupal stage. I remained sheathed in this membrane four days, at the end of which time I made my egress, a full-grown fly. It might be interesting to know that I did all my growing in my larval stage. After this stage we never increase in bulk, but develop from the larva to the fly.

As I had consumed all stored up fat cells before I had completed my larval growth, and as self-preservation is the first law, my only impulse on my advent as a fly was to "hike" for food, and I went forward on this mission in an aggressive manner. Being predatory, carnivorous and herbivorous, with a distinct innate craving for all kinds and blends of putrefactive and decaying radicals, and a regular dipsomaniac for all fermentative brands, I soon filled up. My family are the greatest gluttons on earth, and I have been specially blessed with a ravenous appetite all my life, but as it is a predominating characteristic, I have very poor digestive facilities. At a single sitting I can swallow up over half of my body weight, and do it creditably, but can only assimilate the simplest substances that are easily dissolved by my gastric juices; consequently I have been pestered with constant eructations and a profuse diarrhea all my life. In good physical trim, I will "speck," on an average, about every four minutes; however, being a union advocate, I only work through the day. Since it has been demonstrated that my gastric juice has no effect on any of the dangerous bacteria, you can readily see that the source of diseases from germs that pass through my body is very much greater than from those that cling to my feet. My powers of regurgitation are so acute that immediately after I have eaten, if I discover something I think more palatable, I can at once empty myself, and show a ravenous appetite. I can accomplish this with such a knock that it requires an expert biologist to tell which of my extremities shaped the deposit.

My debut as a house-fly was a luminous success. I immediately visited the waste-pool, a most beautiful sacrophagus for the kitchen slop, and breeder of flies for many seasons, then attended a picnic on a chubby baby's face. Joined a pleasure party, and explored the catacombs, pyramids and chambers, in the land-marks of an old privy, still visited by humans, swine, fowls and degenerates of the canine breed, and was on time at a great function "all around the jelly glass" in less than an hour. My first thrilling adventure was in the little Sanitary Restaurant, where the old German became enraged and attempted to "swat" us, because one of his good customers asked for a segment of berry pie, when in sub-

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stance it was a select host of us banqueting on custard. Following this vivid episode, my migratory instinct to get into everything on earth caused me to accept a conductor's invitation of "All Aboard," and light in a sleeper. My crop being filled with good custard, which I knew would last me four or five days, should there be a scarcity of food, I felt prepared for any trip. Having a predilection for things perpendicular, I landed on the suspended light rod; and being blessed with a compound eye, so anatomically arranged that I can see in all directions at once, I soon had the entire car under my ocular powers, to make any special observations I might wish. I soon became interested in a young bald-headed man just under me, whose head seemed to be the most polished thing in the car. I decided to have some fun, so I rubbed my six legs over my head, to clean the pads on the bottom, which secrete a sticky substance, so I could dance with ease over his polished surface. But when I learned he was a noted M.D., and as physicians are most belligerent, and our most dreaded enemies which embrace all forms of life, from the Protozoa to Man, vengeance and pestiferous persistence were the weapons used on that conspicuous spot. I routed him; he even left his epistle, "The Bar and The Fly." This doctor was on his way to one of Virginia's most fashionable summer resorts, to participate in a great struggle, where science, untiring energy and money were contesting for the life of the only daughter of a wealthy speculator, delirious with typhoid. I decided to land on his grip and follow him to that sad scene. The quick eye of the nurse stopped me at the screen door of the sick room, but I immediately went to the bath room, inspected and perambulated through the contents of the bed pan, to note the hemorrhage, half an hour before the doctor.

In the evening I went to the most fashionable hotel, left my specks on the register, refused a room of dark blue paper, as this color is very repugnant to me, and slept on the ceiling with comfort. Typhoid was the attraction at the hotel, and the star was a woman of forty, imitating youth. She was a martyr to aseptics, sterilized food, medicated baths and carbolized face lotions; and insisted that linen, drapery and upholstery must be daily fumigated. She devoted eighteen hours daily to protecting life from sources of typhoid infection. I easily entered her room, found a select box of bonbons, and deftly deposited ninety-seven thousand virulent typhoid bacilli over the top layer. Christian Science failed her. It could not "rescue the perishing."

In the hotel that week, there was a great representation of noted medical men, to take an active part in the discussion: "House Fly as a Disease Carrier." Being concerned, and of a prying nature, I attended, paralyzed with curiosity. The first paper presented was interesting: "Diarrhea in Children." Facts were that over one-fourth of all deaths occur under five years, and that the largest per cent. of these die with diarrhea, and that a great factor in this astounding mortality was the feet of flies. The writer stated: "That in the slums of New York where diarrhea was most prevalent, flies were found in every home with their bodies and feet literally covered with the germ." It is now recognized that there is a marked correlation with a good fly season and frequency of diarrhea.

These startling remarks were made in the next paper: "The house fly is a dangerous factor in the dissemination of the Great White Plague. They are specially attracted to sputum and feed on it with avidity; they will ingest tubercular sputum, and excrete tubercular bacilli, the virulence of which will last fifteen days." Sputum must be carefully protected, or the flies will spread the disease. In a paper by a noted Georgia physician, who has had much clinical experience with typhoid, he said: "I estimate that ninety-five per cent. of typhoid in rural districts may be laid to the fly." He also said that typhoid killed more people in one year than yellow fever would in fifty. He stated again, that in an epidemic of typhoid he was so sure that flies were the cause, he made this proposition to the people: That if the people would protect their homes by screens as he recommended he would treat all cases of typhoid, without charge, that developed in the homes. Several accepted his offer, and carefully screened their houses, but he never had a case to treat free.

The next paper, a symposium on Vienna's experimental work on the transmission of streptococcic, staphylococcic and cholera infantum infection by flies. This paper was simply astounding. Surely, we must be responsible for all such infection.

Another paper, by a doctor from Florida, stated that the house-fly was responsible for a severe epidemic of "pink-eye" in school, in his home town, that the conjunctival secretions were found on the feet of flies examined from the school room. His statement was corroborated by another, who said that several cases of ophthalmia in a "children's ward" were traced to flies carrying it from one male patient in the same hospital. When they had finished, it was clearly proven we could transmit gonorrhea.

Other interesting papers on anthrax, cholera, plague, small-pox, poliomyelitis and diphtheria were to be discussed, but I

had quantum sufficiat. I left, fully convinced that the statement is correct that "The fly is passing from a disgusting nuisance and a troublesome pest, to a reputation of being man's most dreaded enemy, and being classed as the most dangerous wild animal on the North American Continent."

The next day being Sunday, I went to church to do penance, and lo! the text, "There came a grievous swarm of flies into the house of Pharaoh, and into his servants' houses, the land was corrupted by reason of the swarm of flies." The preacher made special reference to the wrath of Moses at his people for having permitted their bread "to breed flies, and stinketh." The sermon was too appalling; I left, passed through the juvenile room, where the catechism lesson was "Filth and Flies," and went to the shady side of a house for retrospection and to get myself back to equinamity. Being now six days old, it was high time to mate. I had no trouble in finding my affinity after some strenuous love-making. Four days later, it became necessary for me to make my nest. As our breeding places are everywhere, spittoons and rotten animals not exempt, I went to the public dumping ground and found a suitable place. Now some of you doctors, who are good mathematicians, figure my possibilities. I will lay one hundred and twenty eggs, in ten days one hundred and twenty flies will issue forth. Say, sixty are females, in ten days each of these will lay one hundred and twenty eggs. From May 1st to the last of September you will have twelve generations. Raising sixty to the twelfth power, and admitting that many of us lay three or four times during our life, you have the problem. If all my eggs hatch and mature into flies, and each succeeding of mine lay and mature, and all could be collected into one bulk after the frost had killed us, you would have a pile greater than one-third of the earth. If only I had been killed, woutdn't the world have been saved from a fearful calamity?

While at the resort I can't say that I enjoyed good health. I got my proboscis infected with a lot of thread-worms, and would have starved, had it not been that my crop at the time was well packed with food. I also came in contact with a spore, and contracted a fungus disease, but it did not grow sufficiently to destroy me. This fungus growth kills about one-third of us. People think we die, then mold, when really it is caused by fungus destroying us while alive. I will relate another narrow adventure. I decided to try my strength against a wind and landed in the woods. There I got covered with a darn lot of little mites; they sent my soul to the Devil before I could get rid of 'em. After that experience I took the first touring car out for Washington. In Washington, I immediately went to the experimental laboratory. Arrived there just in time to be of material benefit in a great experiment, as to whether we can transmit poliomyelitis. They caught a lot of us, fed us on the cord of a poliomyelitic patient, then killed all, except myself, and injected the contents under the skin of a monkey. In twenty hours the monkey had poliomyelitis—autopsy confirmed it. Me, they paraded around over a sterile plate, to count the spores left per foot-print. The first print gave fifty thousand spores.

These experiments were very distasteful to me; I saw a good opportunity and flew. On leaving, I was attracted by a big placard, being hauled up the street. It read: "Women's Civic League—Necessity for an Anti-Fly Talk." I immediately became excited, and followed the crowd to the assembly hall. The president's address was enthusiastically applauded. She gave a brief history of the study and methods adopted to exterminate us. Said the sharp interest and pioneer work had originated in the United States, and had rapidly spread to all parts of the world; that a perpetual editorial campaign in the interest of this crusade was now international.

The next paper was by an Englishwoman. She paid high tribute to Americans for their original work on the biology of the fly—its life, and dissemination of diseases. She stated that when you destroy our feeding and breeding places, you have made a wonderful progress over sticky fly paper and screens. Over half a million people in London, she said, enlisted during the National Health Week, in the campaign against us. The object of the crusade was to exterminate us by removal and destruction of the garbage pile. Again, she said, "The household must co-operate; one ignorant or careless home can breed enough flies to thwart the best endeavors of the whole district."

The next paper embraced favorable comments on a doctor from Clark University, who said, "It is futile to attempt to exterminate us by fly-paper, window screens and poison." The paper strongly endorsed the doctor's wire-mesh fly-trap, which is made to catch us both going, or coming to, the dwellings. The paper also stated that many leading health officers had given expert testimony that this trap was the best solution yet to exterminate us.

The next paper was by an Idaho lady. She argued that "swatting the fly" had failed; that swatting the garbage can and

filth was now being tried. But that she advocated going back to the first cause, and swatting the "filth maker" as the only solution to the fly problem. She said, "If people would strive as hard to keep infectious material away from the fly as they do to keep flies away from infectious material we could accomplish something."

Man's fight against us is no easy battle. You may destroy our feeding places, make covered manure bins and sanitary garbage cans compulsory, and advocate fly-paper, screens, and traps, but until you start your campaign in the winter, and not wait until we become firmly entrenched and breeding with marvelous rapidity, we will have you out-classed.

Again, before you can intelligently and effectively suppress us, you will have to know much more about our biology; how we perpetuate our species through the winter for such a startling generation. Do we hibernate, or stay dormant? What are our creative instincts and inborn habits, and what natural resistance do we offer? What are our possibilities and facilities for breeding, preserving and transporting diseases?

"O star-eyed Scienee, hast thou wander'd there,
To waft you home the message ef despair?"

Personal and General Hygiene.

By Chilton Thorington, M.D., Montgomery, Ala.

Should we make a list of all the diseases common to mankind it would resemble a Latin dictionary; but draw a line through all those diseases known to be preventable by recent knowledge of hygiene, and it would require search to find them. This is no idle statement, but the conclusion reached by leading authorities on prophylaxis, hygiene and sanitation. If this be true then the matter of promulgating these important branches of medicine should not be entirely relegated to health officers, and boards of health, but should be studied and practiced by the individual citizen.

Health results in the perfect functioning of all the organs of the body; any departure from this occasions all sorts of ill feelings, and causes disease. Personal and general hygiene are so closely related to health, that to disregard one is to pre-empt the other. Nature is intolerant of insults, and is very sensitive; she may not resent them immediately, but most assuredly will do so sooner or later, and will cease not her demands until truly and fully satisfied.

Health is not merely the measure of one's feelings, but represents a money value as well; the loss of so many days by sickness, or disease, is the loss of so many dollars to the individual. The economic value of health does not confine itself to the individual, but may be projected on a larger scale as effecting cities, States and governments; their unsanitary surroundings inviting and propagating epidemics of fatal diseases.

In the intellectual advancement of man, education should not be considered as being complete unless it carries with it a fair knowledge of personal and general hygiene, therefore, apropos of the general agitation of compulsory education, would it not be wise to include particular instruction, at least, to personal and general hygiene. Even a knowledge of the principles of sanitation would not be superfluous, inasmuch as it would conduce to more intelligent cooperation of citizens with municipal health departments.

The discovery of the germ origin of diseases makes possible absolute laws for prophylaxis. The time has but shortly passed when our pharmacal armamentarium contained hundreds of drugs for each disease, but now we have hundreds of diseases where drugs play but a passive part; as seen when treated by mixtures whose chief virtures lie in their physical attractiveness, and palatable taste. Such treatment, although administered with wise countenance, will not satisfy some diseases, although it might satisfy the patient and his relatives. To be abreast of the time we must not only be quick to recognize disease, running its natural clinical course, but must be able to interpret those departures from their usual course, by the fraternizing of organisms, giving rise to complications, concomitant diseases, or sequela.

The commonest factors influencing health may be summed up under the following heads, viz.; Heredity, environment, intellect, occupation and habits. For sake of clearness we shall consider these seriatim.

Heredity does not occupy such a conspicuous place in the causation of diseases as it once did—when nearly all diseases were thought to be inherited or, at least, an inherited disposition towards them. This was not merely the imagination of the laity, but in part the teachings of the medical profession. Fortunately at the present time saner views prevail. Tuberculosis was thought to be—and taught to be—the one dread disease handed down from generation to generation, "Visiting the iniquity of the fathers upon the children, unto the third and fourth generations." That there seems to be sufficient reason for such belief regarding the probability of inheriting tuberculosis we have only to review the family history of patients presenting themselves for physical examination. The following I herewith transcribe illustrative of the assertion.

Patient.—J. S. H., white, male, age 28,

single. Scotch. Came to America three years ago, having lived all of his life in London.

Family History.

Father dead, age 54, tuberculosis.
Mother dead, age 50, tuberculosis.
Brother dead, age 37, tuberculosis.
Brother dead, age 28, tuberculosis.
Brothers living, none.
Sister dead, age 25, tuberculosis.
Sister dead, age 15, tuberculosis.
Sister living, age 38, tuberculosis.
Sister living, age 30, tuberculosis.

The patient finally succumbed to the disease himself. The weight of testimony in such cases would seem to be in favor of inheritance, but we know it to be purely one of infection, by the careless disregard of infected sputum, urine and feces.

Environment is an important factor as relates to health, and may give rise to a greater number and variety of diseases than any other single condition. It represents the kind of water, or other "liquids" drunk; the air that is breathed, and the food eaten; it represents in one a dark, or damp, basement; in another a hot and crowded attic, while the more fortunate may have airy and well lighted apartments. Exposure to all extraneous influences, whether it be the soil, flies, mosquitoes, or what not, must be taken into consideration when making record of one's environment.

Intelligence is a personal equation—the limits of its extremes being elastic—as to reduce its standard to a mathematical quantity is impossible; however, that it figures, in a general way, in the economy of health is amply confirmed by statistics. It is not contended that the most intelligent man is the healthiest man, or that more years are vouchsafed him as a tribute to his knowledge. Far from the truth is this; however, there is reason to believe that a sound mind would be sounder if lodged in a sound body. Intelligence would be included only by way of parenthesis was it not of interest to note that as a rule an intelligent people are healthier than an unintelligent people, as noted not only in races, but in nationalities as well.

Occupation is so closely associated with the condition of one's health as to receive much stress by insurance companies. It may be hazardous, prejudicial, unfavorable, or possibly favorable; however, favorable occupations are rapidly becoming changed, and rendered inimical to health by reason of the mad rush and wild scramble for wealth and position. Of these the Psalmist says "So are the ways of every one that is greedy of gain; which taketh away the life of the owner thereof." And yet reckless man heeds not the admonition—it applies to his neighbor.

Man could not withstand the friction of the day unless nature had made wise provision for that which is lost, by attrition, with her balm sleep, sleep, sweet sleep, a "*Conditio sine qua non*" to health. Why should we then try to minimize it when at least one-third of the twenty-four hours should be devoted to sleep which, more than anything else, combines with a luxurious tire to transport us to that bourne from whence man may, although unwillingly, return. "Yet a little sleep, a little slumber, a little folding of the hands to sleep."

Habits may be the last to strike, after having successfully run the gamut of heredity, environment, occupation, etc., and yet being under the control of man need not have any part in the causation of disease. Bad habits do not only corrupt good morals but their work done in the body may be noted in the "quick and the dead." "Cleanliness is next to Godliness" and is the foundation upon which to build habits. What is more refreshing than to see a clean man, clean in appearance, clean in habits, and in speech. Such men are usually healthy men.

There are a few conditions over which man has no control, and yet they are to be considered among those conditions affecting health, viz.: atmospherical, i.e., moisture, rain, dryness, dust, etc., barometric pressure, temperature changes, prevailing winds, telluric conditions, and, as some insist, "changes of the moon." These conditions of nature are not usually the real, or exciting, cause of disease, but may easily be the contributing cause, therefore, are not altogether negligible, even though they be beyond the control of man. However, it is man's duty to inform himself regarding all these factors entering into the principles of personal and general hygiene, in order that, by putting them into practical daily application, he may keep away disease from his body, from his home, and from his town; and these are they who are able to account for such discrepencies that exist in the vital and mortuary statistics when comparing one ward with another, one city, or a nation.

Hypertrophied Faucial, Pharyngeal and Lingual Tonsils, Their Significance and Treatment.

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Hypertrophied lymph glands, commonly called adenoids, is a diseased condition of the vault of the pharynx. These hyper-

trophies are found mostly on the superior and posterior surfaces of the vault, and extend laterally downwards into the fossa of Rosenmuller and the orifices of the eustachian tubes. The nasopharynx communicates with the tympanum, nose and throat, therefore has quite an important relation both anatomically and physiologically to respiration and audition. It is absolutely necessary that the nasopharynx be in a perfectly normal condition for the respiration and hearing to be natural and perfect. An abnormal condition such as these hypertrophies, causes a train of symptoms and diseases which exert morbid influences, impair their use, and frequently cause organic changes in the ear, nose and throat. As a rule adenoids is a disease of childhood, though found occasionally in adults. This condition and its effect upon the system should be familiar to every practitioner of medicine, who should advise their removal before permanent harm has been caused. It is not the intention of the writer to discuss the etiology of this diseased condition, other than to say that it is, in his opinion, due to a lymphoid diathesis, and may be augmented by colds and other inflammations of the nasopharynx. The etiology plays no part in giving us information as to methods of preventing this condition. Adenoids cause mouth breathing, owing to inability to breathe through the nostrils. The child will snore, his speech will be muffled, he will talk through his nose; the letter N will be pronounced as D, and M as B. Nasal, laryngeal and bronchial catarrhal inflammations will occur. The subject will catch cold easily. There will be considerable nasal discharge. The blood not receiving a sufficient amount of oxygen, through deficient respiration, will impair nutrition and thereby cause anæmia. The child will generally be undeveloped, shallow chested and a shallow breather, seemingly stupid, dull cerebration; will be unable to keep up in his studies and is often deemed lazy and a dullard at school. The mouth is almost always open, the features assume the typical adenoid expression, an almost positive sign of this affection, upon which a diagnosis can be made with nearly a certainty, without further examination. The statement has been made, and I am inclined to think it is partly true, that there are children in the various institutions for feeble minded persons, who have adenoids, and who could probably be benefitted and possibly cured of the cerebral condition by having a thorough removal of these hypertrophies. Children having adenoids suffer with earache, which is often the beginning of a suppurative otitis media; the pain is intense, boring in character, and sometimes causes convulsions, especially in very young children. This pain usually continues until the tympanic membrane ruptures, when it usually ceases. The ear then begins to discharge. After a short time, under proper treatment, the discharge ceases, the membrane heals, and the child has no further trouble with the ear until a fresh cold causes a recurrence of the earache, another perforation of the tympanum, etc. In some cases the tympanic membrane does not repair, and a chronic discharge is the result, which sometimes causes mastoid or cerebral abscess or both, due to an extension of the pathogenic germs to those structures. The frequent rupture of the membrane causes a defect in the hearing, because the scar tissue in the tympanic membrane interferes with proper vibration. Laryngitis Stridulosa is, in my opinion, frequently caused by adenoids. The child being unable to breathe through the nose, and therefore compelled to breathe through the mouth, the larynx becomes dry, hyperemic and irritable, resulting in this affection, which causes such alarming symptoms in the child, and such anxiety on the part of the parents. Torticollis and nocturnal incontinence of urine have been traced to adenoids as the cause, in children, and cured by removing the hypertrophies. It should never be advised, because adenoids as a rule atrophy after adolescence, that no operation be done on the child, for the effects of this disease are likely to be permanent and far-reaching. The diagnosis of adenoids, aside from the facial expression, mouth breathing, muffled speech, arrested development, shallow chest, earache and recurring attacks of suppurative otitis media, is by means of the mirror and digital examination of the vault of the pharynx. In children the mirror cannot be used, as they will not submit to this form of examination. The finger examination is the best method. The finger becomes trained to impressions in the vault of the pharynx, the same as it does in the examinations made by the obstetrician. The presence of adenoids is determined by the lack of smoothness, the corrugated feeling, in the vault. Luschka's tonsil and the eustachian orifices are the only rough surfaces that are encountered in the digital examination. Medical treatment is of no avail, until after the removal of these growths, and only as a means to improve the general health. Some operators advocate the removal of adenoids without an anæsthetic. I do not agree with them, except in the case of adults. In children, without an anæsthetic, the rigidity of the parts, together with the fright and struggles made, render it impossible to do the operation with the precision and thoroughness

with which it should always be done. Then again, other parts of the throat and nasopharynx might be injured by sudden movements on the part of the child. The nearness of the blood vessels on the lateral walls of the pharynx makes it possible that they might be injured in the struggle and serious hemorsrhage reult. All these troubles and the pain can be prevented by an anæsthetic. Ether is the safest in these operations, but it should not be given where there is a pronounced bronchial inflammation. It should be given by the drop method or by vaporization. In children over 5 years an hypodermic injection of morphia and atropia given an hour before the operation will prevent, to a large degree, the excessive accumulation of mucous in the thorat, which is always so annoying to the operator.

The method of operating for adenoids differs somewhat with different operators; some prefer to remove them with their finger nail, others with a metal curette on the finger. The usual method and the one to give the best results, is to remove them with the forceps and curette. If done properly they can be removed, thoroughly, with no recurrence, by means of these last named instruments. Before operating the patient's nasopharynx should be thoroughly wiped out with an antiseptic solution, or a better plan is to have these parts sprayed two or three times daily with some alkaline antiseptic wash. This will cleanse them, but will not render them aseptic, for I think that cannot be done. I usually wrap a piece of gauze around my finger wet with a one to five thousand solution of bichloride of mercury, and swab out the nasopharynx, just before operating. The patient should be placed on his side, with head to side, or he should be placed on his backwith a sand pillow under his shoulders, or the head of the table lowered; either of these positions will prevent the blood and secretions from entering the larynx. The mouth gag should be placed on the most convenient side for the operator. In placing the mouth gag, care should be taken that it fits over the teeth, and that the tongue or cheek is not caught between the teeth and gag. If the growths are not very fibrous, incomplete anæsthesia will be sufficient, if tough and fibrous, longer time will be required to remove them, and deeper anæsthesia will be necessary. It is a very good plan to locate the growths with the finger and then remove them with the forceps. For the past ten years I have been using an adenotome; the adenoids can be removed entirely, without danger of injuring the pharyngeal walls, which is often done with the forceps. I then remove the little shreds, if any, with a Gottstein curette. Care must be taken not to injure the eustachian orifices. Sometimes there are some of these growths in the posterior nares, which can only be removed by means of a ring knife or nasal forceps, introduced through the nose, and the hypertrophied tissue assisted into the forceps with the forefinger inserted into the vault. This latter precaution I find necessary, for unless these growths are removed from the posterior nares, the mouth breathing will continue. The after treatment consists in putting the child to bed for 24 to 48 hours. Some simple nasal wash may be used, but unless there is fever this is not necessary. Usually in a few days the child is well enough to go about. There is one precaution I have found quite necessary, that is to instruct whoever is looking after the child to inspect the throat frequently to see if there is any hemorrhage; another good point is to have the nurse to notice if the child swallows very frequently, for there may be bleeding sufficient to cause it to swallow very often. There are cases reported where the child has become almost exsanguinated before the bleeding was discovered, and had the frequent swallowing been noticed and its significance appreciated, the hemorrhage would have been discovered and controlled sooner than it was.

Faucial Tonsils.—These organs have many orifices which lead into crypts or blind pouches. These crypts are lined with squamous epithelium. Just what are their function is not positively known. Some theories are that they are reservoirs for the phagocytes which find their way into them by diapedices from the lymph follicles of the tonsils and exercise protection by destroying the various micro organisms introduced into the mouth by food and air. Again that they are for the purpose of receiving the saliva which the tonsil absorbs. These crypts usually contain many microorganisms, of various kinds. The mouth is frequently the agent through which these germs are carried to the tonsils. These germs may also find their way to the tonsils through the nostrils. As before mentioned the crypts seem to be reservoirs for the phagocytes, and in a measure destroy them, but some of them are not destroyed, and they, together with the decomposing matter composed of loosened epithelium, fat molecules, lymph corpustules, and other debris, furnish an excellent soil for the growth of the various bacteria that have gained entrance there. When the mucous membrane is in a perfectly healthy condition, it resists the attack of these disease germs. This accounts for the fact that, although present, these germs do not always produce disease. Should the tissues loose their resisting power from injury or disease, then these patho-

genic germs produce their specific effects, and cause local or systemic infection. The local affection may be acute or chronic. The acute form causes symptoms that as a rule point to the throat and tonsils as being affected. In the chronic form there is a low grade of inflammation, which may become acute. The tonsils are not always enlarged, they may remain unchanged in size, be smaller, or recede below the faucial pillars. The crypts in this form are usually filled with decomposing matter, cheesy in character, are sometimes so soft that they can scarcely be held with the forceps, without tearing loose. They are full of bacteria, and frequently the leptothrix grows abundantly on them. It sprouts from out the crypts and from the tonsillar tissue, sometimes from the faucial pillars and sides of the tongue. It appears as small yellowish white specks, which cannot be easily removed. This condition is sometimes mistaken for a follicular tonsillitis. The absence of fever and other clinical symptoms will determine the difference. The gradual absorption into the system of the infectious material contained in a chronically diseased tonsil affects the health, and is the cause of various affections, such as stomach troubles, coated tongue, foul breath, debility, loss of appetite, anemia, cough, cervical adenitis, recurring attacks of tonsillitis, etc. Reflex phenomena are frequently present, due to the intimate relation of the fifth cranial nerve, through the submaxillary, otic, ciliary and sphenopalatine ganglia, with other cranial nerves and also with the sympathetic. These diseased tonsils act as a nidus for the reception and development of the various disease germs, and thereby cause the clinical manifestations of their specific infection, which may be single or combined; if the latter it is familiarly known as mixed infection.

Massei has stated that there occurs a form of tonsillitis which cannot be differentiated from diphtheria without a bacteriological examination; the pseudo membranes resembling those of diphtheria are accompanied with glandular enlargements, albuminuria, and sometimes paralysis. I cannot agree that a true tonsillitis, free from the Klebs-Loeffler bacilli, will produce such clinical manifestations. In diphtheria there is often a mixed infection, both the Klebs-Loeffler bacilli and the streptococcus are found. The tubercle bacilli are also found in some tousils, and in 60% of the tonsils where pulmonary tuberculosis is present. Cases of tuberculous tonsils are found, where the lesion is primary. Inflammations of the tonsils usually result in hypertrophy. These tonsils soon become diseased, are full of bacteria, etc., as before mentioned, and which exert a very deleterious effect upon the system, and in case of acute inflammation such as tonsillitis or diphtheria occurring, the condition is much more serious than when it occurs where the tonsils are not so large. I have seen cases where the tonsils met across the throat and breathing was almost cut off. I had a number of cases from the same school; these patients had chronically diseased tonsils, upon which the leptothrix was growing very luxuriantly. The systemic infection was pronounced. All were anemic, languid, unable to study, had headache, sore throat, indigestion, foul breath, coated tongue. Pressure on the tonsil caused a cheesy matter to exude, which had an offensive odor. The question arises whether or not cases of this kind are contagious, and did these persons contract it one from the other. Many species of bacteria are found in the tonsillar crypts, and it is difficult to demonstrate the specific one that causes the local pathological condition. This is true from the fact that we are unable to acquire a knowledge of the properties of many of them, because of the inability to study them from cultures, as they do not grow upon any artificial medium.

Treatment.—Whether tonsils be large and protrude beyond the pillars, or small and lie beneath them, if they are diseased they require treatment. Such treatment should be surgical in chatacter. The diseased crypts should be thoroughly curetted, or the entire tonsil should be removed. Some think that unless a tonsil is hypertrophied it needs no treatment; this is erroneous, because many tonsils which are submerged beneath the pillars are very much diseased. There often is only a small tonsil lying beneath the pillars, which is so soft and broken down with disease that the forceps pull through it like through butter. This kind of tonsil is the cause of much systemic infection, and when removed, the result, in benefitting the health of the patient is very great. One is sometimes surprised that such a small amount of diseased tissue removed from the throat would so greatly improve the general health.

In adults the crypts must be cleansed of all diseased tissue. This is best done with the punch forceps, or galvano cautery. The anterior pillars must be drawn aside so that none of the crypts in that locality escape a thorough cleansing. The posterior portion of the tonsil must also be inspected and curetted, if necessary, for it is there that it is often diseased. If the tonsil is much diseased it should be removed. In children I always remove them; I never attempt to curette or treat a diseased tonsil, because the child will not submit to the treatment,

and then if it is not removed entirely, the health of the child will not improve, he will be continually under the effects of the deleterious matter absorbed into his system. So the best method to relieve the local and systemic infection from diseased tonsils is to thoroughly remove them. Any method which cuts off the upper part of the tonsil, and leaves a stump behind, is worse than useless, because part of the diseased organ is left in situ, which will continue to exert its deleterious effect upon the system, and will eventually have to be removed, thus necessitating two operations when one, if properly done, would have been sufficient.

No surgeon removes only a part of a diseased appendix; it is not good surgery. Neither should he leave a part of a diseased tonsil in the fauces. A tonsil should be thoroughly removed. The method I adopted and have been using since the latter part of 1903, is as follows: In children an anesthetic is given, preferably ether, by the drop method or by vaporization, the latter method is the better, because it can be given in that manner without interfering with the operator. A suction apparatus is invaluable, as it keeps the throat free from mucous and blood. After the mouth gag is in place the tonsil is separated from any adhesions to the anterior and posterior pillars, being careful not to wound them. Then the tonsil is drawn through the loop of a cold wire snare, by means of a tenaculum or forceps, and when the wire reaches the base of the tonsil it is cut off by a gradual tightening of the snare. The wire passes under the tonsil, like the enucleation scissors passes beneath the eye and removes the entire organ. The two operations are somewhat similar. I have found this method to give me the best results, and to cause less bleeding. In my opinion the excessive hemorrhages are caused by a lack of contraction of the blood vessel, which has become of a fibrous character, and cannot contract, on the contrary it gapes, and thereby allows the hemorrhage to occur. In case of much bleeding the vessel can be grasped with a long hemostat and allowed to remain a few minutes; this will most always control it, if it does not do so, the vessel should be tied. The patient should not be removed from the operating table until the bleeding has entirely ceased. I have found squibb's surgical powder to assist the healing of the tissue, prevent secondary hemorrhage and prevent infection. I dust it freely over the fossa from which the tonsils have been removed.

I keep the patient quiet for a few days, give them cold liquid diet, and where they can use it, some mild antiseptic gargle. A greyish white exudate usually appears in the fossæ after removal of the tonsils; this is a mild infection. I have found a spray of one to two or three of hydrogen dioxide used three or four times daily will remove it, prevent secondary hemorrhage and hasten the healing process. I use the squibb's powder immediately after the operation, and the hydrogen dioxide the day after and until the exudate entirely disappears. An injection into the pillars of a half of one per cent. solution of urea and quinine hydrochloride will relieve the patient from afterpains for some time; this should be done at the beginning of the operation. In adults, where no anæsthetic is given, an injection of this drug should be given about half an hour before operating, and should be seven-eighths of one per cent in strength.

In concluding this subject, I would say that tonsillectomy is no slight operation, to be undertaken lightly, performed at the home or at the office. It should always be done in a hospital, where the patient can be safeguarded in every manner during the operation, and he should be kept under observation until entirely recovered, because post operative complications may develop. It is not necessary that he remain in the hospital more than a day or so, if there are no complications. He can be taken home, but should be kept under observation until well.

Lingual Tonsil.—This tonsil, situated at the base of the tongue, is a mass of lymphoid tissue, from one eighth to one-quarter of an inch in thickness. It is irregular in form, though always somewhat flat. It is located behind the circumvallate papillæ. It contains crypts, often so small that they cannot be seen. In its normal condition it should not encroach upon the epiglottis, there should be free space between them. It presents upon examination many conditions, pathologically, as do the faucial tonsils, and, like them, causes many annoyances, discomforts, and reflex conditions to the patient. Obscure symptoms are frequently traced to this tonsil as the cause; these may be cough, paroxysmal or otherwise, desire to clear the throat, spitting blood or quite a free hemorrhage which alarms the patient, his family and friends. A full feeling in the throat, a constant desire to swallow, a sensation as if something was in the throat, a sense of suffocation, a fear of strangulation, etc. There is sometimes pain and aching of the throat, also a feeling as if there was some part of the throat caught in some manner, producing in some cases quite a severe cramp of the muscles with pain. Some of these symptoms only may occur, and it is seldom that they all do, in the same patient. Those that are present are sufficient to cause the

person to consult his physician for relief. This tonsil should always be inspected in all throat examinations. With good illumination and the tongue held out of the mouth with a napkin, by the physician, the base of the tongue can be easily examined with the mirror. The tonsil may be swollen and enlarged, and corrugated. Large tortuous veins may be found coursing over its surface or grouped closely together, forming a varicose condition. There is usually contact between it and the epiglottis, this often accounts for the majority of the symptoms complained of.

The treatment consists in removing these hypertrophies with cautery or snare. Cutting operations, as in case of faucial tonsils, should be done with caution, as severe hemorrhage may occur. They should never be cut until after the blood vessels that course over them are thoroughly destroyed by means of the actual cautery. Unlike enlarged faucial and pharyngeal tonsils, this tonsil is very seldom found enlarged in children. This condition is mostly found in adults and frequently in those suffering from constipation, rheumatism or menstrual disorders. Local treatment may benefit some cases where there is only slight hypertrophy, and no contact of surfaces exists. Iodine, nitrate of silver, tri-chloracetic acid, or chromic acid, may be used, and is sometimes helpful. My preference is to smooth them down with the actual cautery, taking care not to cauterize too extensively at one sitting, and being careful not to cauterize the epiglottis, as considerable edema may result, even to cause difficult respiration.

In conclusion, I would say before any of these operations are undertaken a thorough physical examination of the patient should be made, especially of the heart and kidneys, and in adults the blood pressure should be taken. Much has been written, lately, condemning the removal of tonsils and adenoids, and censuring the physician for doing it. I think the conscientious physician will give the best advice to his patients, and will do nothing but what is for their welfare, and will not, for the sake of a fee, operate on any person who does not need it, nor will be benefitted by it.

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Simplified Surgical Technic.*

By Dr. J. A. Faison, Bennettsville, S. C.

A short time since we were told that mercuric chloride was the only true antiseptic, and that iodine and carbolic acid were mildly antiseptic. The minimum strength of antiseptic solutions of the remedies named is mercuric chloride, 1-50,000; iodine, as disinfectant, 1-500; phenol, as antiseptic, 1 33. The ideal antiseptic is one that will kill micro-organisms without injuring the tissues. We have been taught formerly that bromin, chloride and iodin, when used in sufficient strength to be actively germicidal, were too irritant, and if used in less strength would not have sufficient antiseptic power. "While all antiseptics are disinfectants and most antiseptics are germicidal, the comparative strength will not apply to all bacteria and their spores indiscriminately." "The nature of the organism, the vitality and physical conditions (grease) preventing immediate contact, must all be considered." Because mercuric chloride, being the most powerful antiseptic and is, therefore, destructive to tissue cells, we are to believe then, that a mere antiseptic wash, when so used, will have the same destructive effect to tissue as would result from a continuous applibation, or dressing. Do you believe this?

When the pendulum swings, it always swings too far; with things that are new. Some of the older members of this society remember when the profession went off at a tangent, and it became the fashion to unsex women. At that time it was so very fashionable that many fashionable women found a willing surgeon near by, ready and willing to satisfy the fad, and remove the ovaries for minor troubles. The pendulum has swung back, and the ovaries are now removed only when the indication is justifiable. A few years since a doctor in one of the Southern or Western States gave his treatment for typhoid fever in one of the journals, which was a daily dose of castor oil. It is incredible to believe that Bartholow and Potter were relegated to the back ground, and this new treatment spread with the rapidity of the fire from the fox tail brands of Sampson. If you will excuse personal experience, I will say that seven or eight years since I was confined to my bed with sciatica for three months. One day two of my town doctors came to see me and told me of the successful treatment for various neuralgias, by an eminent near-by doctor, with castor oil in drachm doses every three hours, and told me to try it. This nauseating remedy of my childhood was the remedy! Although I could not understand the rationalæ of the treatment, I must be credulous as a patient, and so ordered and began the treatment. The first three doses purged me, and I digested the other five doses as food, and became constipated, with no other results. So I retraced my steps to the other end of the tangent in short order. When antipyrin was first introduced in this country, two tons were used in the

*Read before Pee Dee Medical Society at Florence, S. C., December, 1913.

city of New York, in as many weeks, for lagrippe. You well remember the cold, and even ice cold, baths as a routine treatment for typhoid. But enough about the credulity of doctors.

Now we are told that all the use a surgeon has for water is to wash his hands and instruments, and for drinking purposes; and that gasoline, iodine, and alcohol are all that he needs. Gasoline is a solvent for fats. I have had considerable experience with automobiles, and when I get my hands greasy and dirty and wash them in gasoline, they are never so clean as when I follow the gasoline with soap and water. I can find little in the Dispensatory about gasoline, but it must be a germ killer, when it can be drawn from a dirty auto tank and applied to wounds, as some doctors advise in emergencies. Iodine is antiseptic probably when used 1-500 and when the Tr. is diluted 50% is about 1 to 30, which ought to be a fairly good antiseptic. If used too strong it combines with albumen of the tissues and causes exfoliation. Iodine has long been used in gynecology, and I have washed out the uterus with a solution of iodine after miscarriage for twenty-five years, but the Mayo brothers and others have given it renewed impetus in general surgical practice. The field for operation has been painted with iodine for several years, but so far as I know the surface was washed before the application. I heard a good surgeon in a hospital say recently that he had patients who had not taken a bath in a year, whose scaley skin when painted with iodine would show a white line of demarkation when the scales were cut through. In dealing with dirty patients it would seem the part of wisdom, for those who have such antipathy to soap and water, and bichloride, to use lysol, which is both antiseptic and disinfectant. Lysol in 1-1000 will kill streptococci in fifteen minutes. Alcohol is antiseptic and disinfectant; it has comparatively little bactericidal action.

Bichloride seems to need a champion. I do hate to give up an old and tried friend. The medical profession stands with respect to bichloride of mercury and soap and water, in the position of one who owes an obligation that can never be forgotten. With fervent mind I give the obituary of passing friends, who have been the preservers of so many millions of lives. I do hope that some future publisher of private memoirs shall preserve my claims for, and confidence in, these old and tried friends.

"O horrible to stand alone,—
Amid a glimmering world of dead;"

"I am watching events. What wonderful things are events!" An event has occurred in such brief time to change the relation of remedies; yes, even threatens to supplant a drug that has made the surgery of today possible.

I must bow to the judgment of the initiated, and follow suit with benzine, iodine and alcohol. The teachings of Hamilton and the practice of thirty years have gone glimmering with the things of the past. I have been taught that pure water was good for the outside as well as the inside of man. But no more water, no more bichloride. One friend, only, has a place within these walls.

It would seem to me that by first using benzine as a solvent for fats, and then follow with green soap and water, then paint with iodine, we would have as surgically clean and favorable condition as could be desired.

We must keep up with medical and surgical advance. We must cling to the skirts of those of penetrative and sagacious mind who are blazing the way; and not wait for the slow authors of surgery to say this is new, this is true and we recommend it to your confidence. As practical men, we will no longer practice the blunders of our predecessors. When I depart from soap and water and bichloride, I will follow strictly Bastianellies method as described further on in this paper.

In twenty-seven years practice I have never seen a case of tetanus, under the old treatment. Remedial measures endure if the foundations be sound.

The operating technic at St. Mary's Hospital in 1909, so far as it concerns this article, was as follows: "Scrub up patient in operating room with Jumbo soap which contains pumice. This soap removes grease, loosens epithelium, leaving the skin clean and smooth.

The preparation of the field of operation consists in scrubbing with Jumbo soap and gauze. After being thoroughly cleansed with soap and water, Harrington's solution is applied (which is bichloride, alcohol and water). If the skin is rough and irritated it is then painted with Tr. iodine, hands and arms scrubbed with Jumbo soap, followed by Harrington's solution about the nails, then alcohol. All instruments and gloves sterilized. In 1911, E. H. Beckman of the Mayo Clinic, introduced the method of the Italian physician, Bastianelli.

"The metood of preparation consists of applying two solutions to the dry skin. First solution is iodine, 1 part (crystals) to 1000 benzine. Solution No. 2 is 50% of Tr. iodine. If necessary shave parts either dry or by using benzine, no water. Field may be shaved some hours before. No. 1 is painted over field of operation with a piece of gauze, rubbing enough to remove all dirt

and scales from the skin (so you see this is not mere painting, but washing the field with iodine and benzine mixed). After the application has evaporated and the skin is dry, then solution No. 2 is applied, with pledget of cotton or gauze. One coat of each solution.

After having used this method of preparation in all classes of cases for more than a year, we can recommend it." (Beckman).

I will describe Professor Bastianellie's method of Rome, as given by William J. Mayo. His method of preparation of patients is rapid and apparently effectual.

The patient is washed, and shaved without soap, some hours before operation. When brought to the operating table, the field of operation is scrubbed with benzine, containing 1 to 1000 iodine. When the skin has dried it is covered with Tr. iodine and ths patient is ready for operation." Water is not used at the time as it causes swelling of the epithelium and prevents penetration of the iodine. Dr. Mayo recommends this treatment. This is good treatment, and differs somewhat from the methods I heard presented recently.

At a recent meeting of the A. C. L. Surgeons, gasoline, iodine and alcohol were advocated.

Why use gasoline at all? None of the authors quoted use or recommend it. It is benzine and not gasoline that is recommedded. If you go to a drug store and ask for benzine, they will tell you that gasoline and benzine is the same thing. Benzine is not gasoline.

Gasoline requires five or six times its bulk for solution in alcohol, while benzine is much more soluble.

"That portion of petroleum boiling below 50 degrees Centigrade constitutes naptha or gasoline and consists almost exclusively of pentane and pentene. (Pentane is an anesthetic liquid hydrocarbon $C_5 H_{12}$ from naptha—pentene same as amylene $C_5 H_{10}$). Petroleum benzine of the U. S. Pharmacopœia consists principally of pentane with much hexane $C_6 H_{14}$ (hexane a liquid hydrocarbon) and heptane $C_7 H_{16}$." Gasoline by retail is 18½c. a gallon, while benzine purified U. S. P. is 45c. a gallon wholesale and would probably retail for 75c. a gallon. The minds of the doctors as well as the druggists of our Southland are very much befuddled over this petroleum product of the U. S. P. Then follow the masters and use benzine as they do, instead of gasoline, for they are not the same.

E. H. Beckman, M.D., of the Mayo Clinic, says:

1st. "All patients may be considered infected before any operation is performed, and when suppuration occurs, the surgical technic employed has failed to overcome the infection. 2nd. Many surgeons apparently regard the tissue of the body as being sterile. It may be assumed that pathogenic bacteria may be in the tissues, or introduced from sources outside, or both."

"Once a wound has been involved by micro-organisms it becomes not a question of getting rid of them, but rather preventing the occurrence of further infection, by getting rid of all culture material, as wound secretions, etc., and by establishing proper drainage, cleansing the surrounding parts and applying sterile dressings."

"Circumstances may arise, insevere hemorrhage, or a dangerous narcosis, to render a perfect aseptic or antiseptic procedure impossible. Then we must lay aside other considerations, and save our patient from impending dangers." The approved aphorisms of aseptic and antiseptic surgery, when established, must be accepted and adopted by us. The surgeon who does not follow some approved method (if not the latest) cannot escape the responsibility. "The surgeon will have scientific convictions, and is not bound to follow any specially planned procedure," for the personal equation is a factor, as it relates to the operator, as well as the individuality of the case itself.

In May, 1913, Dr. Beckman, of the Mayo Clinic, gave the following statistics for 1912: Surgical operations performed 5,835, with 111 infections. If infections occur at an up-to-date hospital like this, we may expect an occasional infection, when we have to operate under such unfavorable conditions and environments, with limited and untrained help. It behooves us as surgeons to do our best to make ourselves clean, and everything else that comes in contact with the patient as sterile as possible, whether we follow the old or new technic.

Bacterinl Vaccine Therapy.*

By Dr. Bess Puett, Dallas, N. C.

From comparatively small beginnings, the practice of what is now called bacterial vaccine therapy has come to assume proportions of great magnitude. Six or seven years ago an occasional worker, well trained in the methods of bacteriology and immunology, prudently felt his way in the pursuit of opsonic therapy, as it was then called. Now a large number of practicing physicians are inoculating their patients with bacterial vaccines.

When the vaccines first came into use,

*Read before the Seventh District Medical Society of North Carolina recently held at Lincolnton, N. C.

they were all prepared from the patient's own lesions and re introduced into the patient for therapeutic purposes (the so called autogenous vaccines); today vaccines of all probable (and no doubt some improbable) pathogenic bacteria are procurable in the market, ready for use, with real or fanciful indications for their employment.

Formerly the autogenous bacterial vaccines were cautiously administered by the expert bacteriotherapeutist under the guidance of the opsonic index. Today it is administered by any physician, but it should be under the guidance of a bacteriologist, as the value and limitations of the vaccine are far from being accurately determined.

Bacterial vaccine therapy is either prophylactic or curative. It is an artificial means of bringing into action the natural process for curing diseases. Bacterial vaccines, whether living or dead, are antigens. Under the stimulus of the presence of the bacteria, or their products in the body, the whole organism is aroused to the production of an active immunity through the formation of the antibodies capable of neutralizing the poisons of the invading bacteria or of destroying the bacteria themselves, or of stimulating the phagocytes to dispose of them. If the production of these antibodies is sufficient the blood is freed from the bacteria and their poisons, local foci of disease heal and the infected person fully recovers, or if the production of antibodies is insufficient, the patient succumbs to the poison of the disease and dies or lingers with chronic infection.

If the essential factors, like the nature, dose and dose interval of the vaccine, be correctly ascertained the opsonic index as a routine may be dispensed with.

The active agent in vaccine therapy is the bacterial vaccine, which is a suspension of bacteria in water or in normal salt solution. All the bacterial vaccines in general use consist of bacteria killed by heat, and almost without exception, a disinfectant is added to the suspension of killed bacteria to serve as a preservative. They are thin watery mixtures, more or less cloudy, according to the number of included killed bacteria.

In making the vaccine, one must start with a pure culture of the particular species of the bacterium whose vaccine is desired. The next step is to secure a sufficient growth, and having obtained this the culture is converted into a vaccine. The culture is mixed with sterile saline solution which is sterilized, then standardized, and finally diluted and the chemical preservative, usually cresol, added.

Vaccines may be classified as autogenous and stock. Each of these is susceptible of further subdivision.

Autogenous vaccines are derived from bacteria taken from the patient in whose treatment they are to be used. They are usually simple, being derived from a pure culture of a single causative organism taken from the affected tissues. In certain cases, however, differentiated mixed vaccines are employed where two or more species of bacteria are shown, by bacterial examination, to be associated in the diseased condition.

A vaccine made in a bulk and afterwards subdivided to obtain proper dosage, is called a stock vaccine. They may be single or mixed.

Theoretically, autogenous vaccines are the best of the two. By their use antibodies of precise nature are aroused and this is found to be a predominating characteristic of antibodies as further progress is made in their study. A stock vaccine may be of no value whatever in the production of immunity in any given case. Even when a number of different strains are used in the preparation of the vaccine, it is most often markedly inferior to the autogenous vaccines. If there were certainty that the infecting organisms were of the same strain as the one used in the preparation of the vaccine, then such a stock vaccine would approach the efficiency of the autogenous vaccine. Unfortunately many of the most common bacteria differ in different strains in the production of immunity, as much as the bi chemical characteristic of bacteria of different species differ. The experience of the best qualified specialists in vaccine therapy demonstrates that the most uniform and most satisfactory therapeutic results follow the use of the autogenous vaccine. This has been demonstrated to be due to getting the organisms in the vaccine of exactly the same strain as the infecting germ.

Some technical objections to marketed stock vaccine are

1st. Uncertainty as to source of culture; thereby you are in danger of infecting your patient with some other disease.

2nd. Uncertain age of culture.

3rd. Possibility of dangerous contamination.

4th. Uncertainty as to dosage.

5th. Complicated and expensive containers.

The best results from vaccine treatment have been obtained in cases of infections due to the pyogenic cacci. Some of the diseases in which it is used are furuncles, in which it is very effective, puerperal infection, gonorrhea, pneumonia, otitis media and, in fact, all diseases of bacterial origin.

Dr. Colgin, of Waco, in a recent article in the Southern Medical Journal, says, "The best authorities contend that the

greatest field for vaccine treatment is in the chronic and subacute type of cases. Next, in the acute localized infections as cystitis, and, lastly, in acute general infections, as septicemia, in which, in my opinion, vaccine should not be used, leaving this class of cases to be treated by serums. Vaccines should not be used in acute infections which normally have a tendency to run their course in a few days; nature in these affections is using all her resources to establish her own immunity and the negative phase which results may turn the tide in the wrong direction."

Dr. Craig, of New York, in a paper written in 1911, says there were sixty-seven different conditions treated by the vaccines, and there are probably many more now.

The inoculation technic is the same as in an ordinary hypodermic. The vaccine should be shaken well just before using, as the bacteria sink to the sides and bottom of the container if undisturbed. The average inoculation-interval in treating subacute and chronic infections is from five to ten days, and in acute, from two to five days.

Some patients have a general and local reaction after taking the inoculation, but most of them do not feel any bad effects. With uncontaminated vaccine in proper dose, skilfully administered, direct harm is most uncommon, if indeed, it ever occurs.

Dr. John Richards, of New York, gives the following rules for the dosage, viz.:

1st. The first dose, and the first dose only, is to be decided arbitrarily.

2nd. The second dose and all succeeding doses must be regulated by the effect of the first dose.

3rd. A marked local reaction accompanied by increased severity in the symptoms of the disease and no improvement before time for the next dose, indicates that too large a dose has been given.

4th. Slight local reaction accompanied by slight or no increased severity in the disease and followed by no improvement before time for next dose, indicates that too small a dose has been given.

5th. Slight or no local reaction, accompanied by moderate, slight or no increase in the severity of the symptoms of the disease and followed by improvement in the condition of the patient, indicates that a correct dose has been administered.

So long as clinical improvement continues, there is no need for increased dosage; but when this ceases the dose should be almost doubled. Good results should not be despaired of until five billion or even ten billion have been attained.

On March 18, 1913, I began the use of an autogenous vaccine in the treatment of a case of acne of ten to fifteen years duration. The patient's face was disfigured by large and small papules extending from the forehead down on to the neck. The bacteriological examination showed an infection with the staphylococcus albus. The vaccine was made from this pure culture of the germ and the first dose ½ c.c., containing 250,000,000 bacilli, given March 18th, and repeated in seven days, and the third dose seven days later. There was no reaction, either general or local, so the dose was increased to 1 c.c. and given every fifth day. After the fourth and fifth doses there was some improvement. The improvement was gradual after each succeeding dose and after the tenth it was marked,—the finer lesions disappearing first. New lesions were appearing all the time, but these were not so severe as the initial ones. Some pigment remained where the larger lesions were disappearing. After taking about fifteen doses the improvement was so slow again that the bacteriologist advised me to alternate doses of a stock vaccine of the acne bacilli with the autogenous, as there is so often a mixed infection of the two. There was marked improvement after two doses of the acne vaccine and by June 1st the face looked almost like a new one but still had some lesions. The autogenous was kept up until July, then we stopped treatment for a month to notice the change, as all lesions had about disappeared. At the end of that time other complications set in which prevented further treatment until September 15th, at which time quite a number of lesions were on the face. Then I began the autogenous vaccine again and with very little improvement. On October 20th, I began the acne again with more marked improuement. At present the face is almost well, but I shall continue the autogenous vaccine at long intervals for some time, as this is suggested to prevent the recurrence of the lesions.

In the treatment of acne if the cases are taken early they will often be cured by a few doses, but the chronic cases may take from six to eight months. The large papular variety usually yields to treatment more readily than the smaller lesions.

Hot applications and gentle massage help a great deal in the chronic cases, and some doctors advise curetting and also a sulphur lotion in connection with the vaccine.

The Faucial Tonsils.*

By Dr. John Hill Tucker, Charlotte, N. C.

Being asked to prepare a short paper on the physiology and pathology of the tonsils, it at once occurred to me that I would try to avoid a repetition of the text books we

*Read before the Mecklenburg Medical Society, Tuesday, January 20th, 1914.

are so familiar with, and say something of my own observation in dealing with the tonsils during the past five or six years, but I find that my own experience has been just such as is commonly reported in the usual text books along this line.

As far as the physiological function of the tonsil is concerned in the human economy, I have never been able personally to attribute any untoward or harmful symptoms following the complete removal of the tonsils. Of course, in this paper I am referring entirely to the faucial tonsils. In fact, I am convinced of the fact that when surgical interference becomes necessary in the tonsils, the proper procedure is to enucleate the organ in its capsule. In instances, and in the beginning of my work they were numerous, where the capsule was injured and pieces of the tonsils left I have had trouble following the operation, but always without a single exception, where I have been able to entirely remove the tonsil, and the operation was indicated, my results have been happy.

Of course it is necessary to give a short anatomical description of the tonsil before I can discuss briefly its functions. The faucial tonsil is situated in the sinus tonsillaris between the faucial pillars, having its embryonic origin in the hypobast. It is divided into many compartments, or crypts. In a normal tonsil these cryptic depressions are covered with mucous membrane, while the hidden surface of the tonsil is encapsulated in a fibrous capsule. These crypts vary from eight to twenty in number. The outer surface of the tonsil is attached to the superior constrictor muscle of the pharynx. The anterior pillar is formed by the palatoglossus muscle and the posterior pillar by the palatopharyngeus. In this, as in other questions not definitely decided by facts, the authorities vary as to the actions of these muscles. Some authorities claiming that in the act of deglutition the crypts are compressed and emptied into the throat, whereas other authorities claim that the act of deglutition rather forces food and bacteria into the crypts. It would seem to me that the latter theory could be given as ground for the frequent infection of these organs by food stuff being forced and retained in the crypts. Experiments carried on by Wright and others have lead to these conclusions: that in the crypts the lining epithelium gives off a poisonous ferment, whereas the bacteria throw off a toxin, and as long as the crypt remains in a state of health an equilibrium between immunity and infection is maintained. In other words, the tonsil acts in a protecting capacity in the human throat. However, when the tonsil becomes diseased, it becomes a source of infection to the most remote parts of the body due to the fact that the tonsil drains into the deep cervical lymphatics and thoracic duct. There is a claim on the part of certain investigators that the tonsil has a secretory function, which they liken to the suprarenal gland.

I cannot help from recalling how, while a medical student at the University of Virginia, it was the custom to remove the ovary for almost every abdominal complaint of the female, and how some years afterward, this indiscriminate removal of these organs was questioned by symptoms, which in after years showed up in the patients thus treated. I repeat, I am made to wonder if such a condition will be realized in the years to come from the wholesale and complete removal of the tonsils which is so much in vogue today. On the other hand, I must admit that I have not seen any bad effects from the complete removal of diseased tonsils, but have been an eye-witness to the most astounding and pleasing results from their complete removal from the immediate clearing up of a severe cervical adenitis, to the relief of arthritis deformans. And in a case of fever, which was watched, with typhoid in mind, by a most excellent physician, for four weeks before the throat symptoms came under scrutiny and the suspected typhoid was relieved by the complete removal of both tonsils.

Now to briefly summarize, the tonsil is said to exert the following properties:

"First. A biomechanical resistance to the invasion of microorganisms.

Second. A biochemical destruction of microorganisms in the crypts through the agency of a ferment thrown out by the epithelium under the stimulus of the retained bacteria. This process is known as bacteriolysis."

Third. A certain secretory function has been attributed to the tonsil.

The first two properties above stated have been proved by experiments on the tonsils conducted by Wright, Goodale and others, by using colored granules and bacteria. As to the secretory function—that is entirely speculatory.

Now as to the pathology of the tonsil—volumes have recently been written along this line. In fact the typical tonsil and adenoidal facial expression is today well known, even among the laity, and perhaps in the whole field of medicine there are no results more satisfactory, both to the physician and his patients, than the proper surgical cleaning out of obstructing and infected adenoids and tonsils.

I have operated from three months of age upward and in many instances where children were generally sick with what is com-

monly called colds and intestinal disturbances, these conditions have cleared up like magic when the adenoids and tonsils were removed and found to be diseased.

To report a case seen in my office in May, of a child two years old whose mother reported that he had been sick all of his life with colds and diarrhœa. She had been advised to take the child to the seaside, which she did. However, the improvement was not satisfactory. While there she called in a physician who advised the removal of the tonsils and adenoids. The mother returned to Charlotte and we operated, removing a large infected mass of adenoidal tissue from the post-nasal space. The child at once began to improve—gained in weight, and the mother reported five months later that the child had not been sick a day since the operation. This is but one of many instances that every man doing this line of work could readily report.

The usual bacterial infections are pathogenic microorganisms, including the streptococcus pyogenes and the staphylococcus aureus and albus and the pneumococcus and the tubercle bacilli.

Inflammations of the tonsils vary from the acute follicular tonsilitis to tubercular tonsilitis. What is commonly known as quinzy is a phlegmonuous tonsilitis with peritonsilar abscess, the causation of which is about the same as that of acute tonsilitis.

A condition of the tonsil which we are often called upon to deal with, is where there is a calcareous formation in the caseous plugs filling the crypts of the tonsils. These calculi at times become very large.

We know, too, that tonsilitis is often associated with specific fevers, such as scarlatina and diphtheria.

It is very hard in a short paper to go very much into the pathology of the tonsils—and indeed, so full is modern literature of the various changes and infections in diseases of the tonsil, that it would be a vain repetitiou and copying from literature on this subject to say more than this.

It is always well under all circumstances, and in all ages from birth to death, to look in the human throat and nose for a probable portal of systemic infection.

Very likely, the tonsil is now the organ in bad surgical and medical repute, and when all that is being said and written about this much discussed organ is finally sifted down to common sense and the medical and surgical truth in reference to this organ is known, many a tonsil that is being hurriedly enucleated today, will be successfully cleansed and locally treated. Particularly will this be true of the chronic forms of the follicular tonsilitis. It is a matter which time and experience will decide. With our present knowledge it seems best to me to either locally treat, or completely remove the tonsil.

While writing this last sentence, there came into my office a patient, fourteen years old. who has been running a temperature for three weeks and in the past few days has developed a large tender mass on the left side of the neck on a line with the angle of the lower jaw, giving the following history:

Two years ago both tonsils and adenoids were supposed to have been removed and the child has not been entirely well since then. Upon examination of the throat and pressure upon the anterior pillar on the left side the remains of a large, badly infected tonsil is brought readily into view with an offensive pus oozing from every crypt. This case alone, answers to my mind the whole argument in reference to the tonsils. If they should be removed at all, they should be removed in their capsule, and I cannot too often or too earnestly repeat my firm convictions, based upon actual experience with the tonsil, which is diseased and demands surgical interference, should be removed in its capsule, and then, and only then, can you feel secure as to the future. When this is done the results are always most gratifying. If pieces of tonsils are left, ninety-nine times in a hundred you are either going to have to operate the second time or get in bad with your patients. So then, operate completely or treat conservatively.

Tuberculosis of the Knee.

By Dr. Robt. Mann, Memphis, Tennessee.

Tuberculosis in all of its phases has been well gone over from time to time, but if there is one subject in the realm of medicine that permits of reiteration and rehash tuberculosis certainly deserves that distinction, for when we stand face to face with its woeful death dealing activities we shudder with the realization of our helplessness.

Tuberculosis of the knee is commonly misjudged in its early stages for rheumatic arthritis, growing pains, etc. The trivial inconvenience and insidious onset often causes uo to become careless in our investigation and the grave finds our negligence a veritable feast.

Tubercular arthritis *per se*, though extremely grave and deserving of our most serious consideration, is not of more importance than the fact that the infection may have metastasized from some remote focus or may metastasize from the joint to some distant structure who possess a locus minoris resistintae.

Tuberculosis of the knee is more com-

mon in the young and is generally secondary to an injury. It may attack any or all of the structures that enter into the joint formation; the synovial membrane is rarely affected primarily except in the young, the cartilages and ligaments practically never, and owing to their structure never through metastasis.

The bone is the first element of the joint to become involved in most adult cases, it is really a true tubercular osteitis which travels toward the joint, that being the course of least resistance. The cartilages and synovial membrane may suffer an inflammatory reaction long before the infection reaches them, which makes the situation more complex and deceiving as to the location of the primary infection. Primary infection of the synovial membrane causes a large amount of synovial fluid to be formed which may contain many endothelial cells, tubercle bacilli, etc., giving the joint a fluctuating feel, but when the infection begins in the bone, the contiguous structures become infiltrated, causing a swollen pulpy condition.

The infection, pressure from the increased fluids and contraction of the muscles that pass the joint may cause a complete disintegration of the ligaments, cartilages, synovial membrane and an erosion of the bony surfaces, which may later become adherent, giving a complete or partial ankylosis. The intense muscular contraction may dislocate the tibia backward after the ligaments have become relaxed. The constant muscular contraction causes them to waste and the affected limb becomes much smaller, which accentuates the swollen effect of the joint, giving it the characteristic spindle shape.

The tubercular products around or in the joint may caseate or receive a mixed infection and suppurate pus from which may break through the soft parts adjacent to the joint or follow a fascial plane and rupture some distance from the joint, leaving an almost characteristic discharging sinus which heals with reluctance. The bone or bones may break down forming sequestræ, fragments of which are frequently thrown off through the sinus.

The symptoms of tuberculosis of the knee are generally not pronounced, but by painstaking investigation and with a clear picture of the pathology kept in the mind's eye it is in many instances easy of recognition. Any ailment, however trivial, about the joint, particularly in the young, should arouse our most profound interest and be considered with apprehension, even though the general appearance indicates perfect health, for upon an early diagnosis will depend to a great extent the efficiency of our treatment.

There is no routine treatment for tuberculosis of the knee, for our efforts are governed more or less by the damage that has accrued. All modern surgical procedures are directed toward increased power of general resistance and fixing the diseased member under conditions most favorable to recovery.

The flexion of the leg and jamming together of the bones, which causes such destruction and pain, is best overcome by a Buck's extension or some appliance that will overcome the constant muscular contraction and at the same time hold apart the bony surfaces and prevent ankylosis.

The pressure from the increased fluids is best relieved by aspiration, not by incision as is sometimes done, for besides the great danger of mixed infection the lining of the joint is by nature an anaerobic membrane and atmospheric contact tends to destroy its endothelial lining with a resultant agglutination of the contacting parts.

If the fluid is infected it is well after aspiration to inject into the joint iodoform emulsion or a 2% solution of formalin in glycerine, mixed 24 hours before using. This not only renders the joint contents a bad culture media but also increases the outpouring of phagocytes. If it is determined that the disease is making rapid inroads on the joint structures and that the toxines are being rapidly absorbed and are overwhelming the patient's vitality, it is best to incise the joint, giving free vent to the toxic products.

If the head of the tibia or femur is found to be necrotic to the extent of hopeless repair, excision is the procedure indicated. If poor repair is expected, and the patient's life has been put in jeopardy by long continued toxic absorption, amputation should be substituted for conservatism; we have, however, to resort to such radical measures very seldom in properly handled cases.

310 S. Main St.

Hemorrhage of the Newborn; A Case.

By Hubert Haywood, Jr., M.D., Raleigh, N. C.

The following record of a case of hemorrhage in the newborn was of so unusual interest to me and the results of the treatment so unexpected and satisfactory, that in reporting it I feel it may be the means to others in like circumstances of saving life.

History.—Full term child; male; mother in good physical and mental condition; appetite and digestion normal; urinalysis declared kidneys normal; primipara; no history of miscarriage. There was a slightly contracted transverse diameter of the pelvis. Family history on both paternal and maternal sides gave no record of tuberculosis or lues: mother one of eight living children.

No "bleeders" in the families on either paternal or maternal side. Duration of labor 14 hours.

After thirteen hours in labor, the os being fully dilated and head engaged, and labor pains becoming irregular and weak, I gave a hypodermatic injection of Pituitrin, ½ cc., and one hour later the baby was born, cyanotic. Artificial respiration was applied and continued for fifteen minutes before the baby showed power of natural respiration. On examination the baby's head was found very much compressed and elongated.

The first 24 hours after birth blood showed in the stools, and on the second day bleeding from the mouth and oozing from the scrotum were persistent. There were severe and repeated convulsions and the infant became very cyanotic, vitality very low, heart beats feeble, and pulse unperceptible; there was rapid emaciation. The infant was fed with great difficulty, for unassisted it could not nurse and artificial feeding was resorted to. It was given condensed milk, one part to fifteen parts of water, every two hours, and even this expedient was found difficult, so low was the vitality.

On the morning of the second day after birth at nine o'clock I gave, by hypodermatic injection in the gluteal region, 10 cc. of coagulose, again at five o'clock, p. m., I repeated the coagulose, injecting this time below the scapula. On the third day after birth the coagulose was again repeated, 10 c.c. in the gluteal region. The infant further received, for four days, calcium chloride, grains ij, every four hours, and calomel, grain 1-20, every four hours for ten days.

After the first injection of coagulose the bleeding from the mouth and the oozing of blood from the scrotum were very much lessened, and after the third dose the bleeding ceased entirely. The stools contained both fresh bright red blood and dark old blood. The improvement in the infant's condition after the fourth day was rapid; its color became clear, its strength and vitality increased and it was able to nurse from the breast.

When the infant was seven days old there developed a pronounced exanthema of the entire body, and two days later the desquamation commenced, the epithelium coming off in large flaky sheets. During the height of this exanthema the temperature per rectum reached 106° F., and at no time was it lower than 192° F.

The infant is now eighteen days old. It has gained wonderfully in strength and vitality, is nursing at the breast, increasing in weight, and seems a bright winsome baby. There is a slight pustular eruption on the face and body. No Wassermann reaction was taken. At the points of injection of the coagulose very slight indurations are left. The infant is now getting calomel, grain 1-20, t.i.d.

In this most remarkable case, considering the prompt and rapid as well as continued improvement of the patient after the administration of the coagulose, there would seem to be no doubt that it was the beneficial effects of coagulose which saved the life of the child.

Artificial Feeding of Infants.*

By L. T. Royster, M.D., Norfolk, Virginia.

The study of dietetics has occupied a very much larger place in medical literature during the past twenty-five years than in any other period in the history of medicine. The larger proportion of such work has related to infants, indeed, to the careful and scientific investigation of the relation of certain food elements to the infant economy is due the wider interest in dietetics in general. The investigation of infant feeding along scientific lines was in reality a pioneer work. Many important discoveries have been made and in some instances their practical application has in large measure modified infant feeding. Almost as soon, however, as a new discovery was made or emphasis was placed on a certain food element there immediately sprang up, at least among the general practitioners of medicine, "a new method of feeding infants." This has been unfortunate because there is no such thing as "a method of feeding infants" beyond the two well recognized methods of breast feeding and artificial feeding. In the one we have nature's method, which is not only the best, but the only rational one, in the other we have the artificial method, which we are compelled to use from time to time when called upon to supplement or entirely supplant maternal nursing.

The artificial method has under all conditions for its foundation dilutions or modifications of the milk of some animal; for convenience, in this country usually that of the cow. In order to adapt cow's milk to the digestion of the infant, certain substances and processes are utilized, and to these the modern student gives the name of "resources," consequently I shall speak for a few moments on the proper use of these various resources in infant feeding.

For many years, and even to a certain extent at the present day, the proportion of these various resources were used empirically and guess work played a very important part in their employment and arrange-

*Read before the Seaboerd Medical Assoeiation at its last meeting in Norfolk, Va.

ment, but fortunately for the infant with increasing knowledge there has developed a more definite and scientific procedure by which we are enabled to adapt the various food elements to the requirements of the individual infant. Regardless, however, of how the infant is fed whether on simple dilutions of cow's milk with the addition of one of the various sugars, etc., or whether by the use of so-called "top milk," or again by means of milk, cream and water, we should always be able to state very definitely the percentage of fat, carbohydrate and proteid which the infant is getting in the 24 hour mixture, for only by this means can we determine what element is causing trouble and thereby be enabled to accurately adjust the amount of the particular ingredient.

In the beginning, therefore, I wish to urge very strongly the feeding of infants by means of definite percentages of the various elements, and in order to do this, the physician in charge, whether he be pediatrician or general practitioner, must accustom himself to thinking in percentages rather than in quantities. I shall consider the various resources under separate headings.

Our main reliance, in order to be definite, should be dilutions of cream, skim milk and water which gives us the greatest number of possible formulæ. For the ordinary home modifications, which any intelligent mother can be taught to do quite well, we use the usual quart bottle of milk which is allowed to stand for several hour, or until the cream rises to its fullest extent. By removing different amounts from the top by means of a Chapin dipper, we get a cream of varying percentages of fat. For example, the upper two ounces contains approximately 24 per cent. fat; the upper three ounces 22 per cent.; the upper four ounces 21 per cent.; the upper five ounces 20 per cent.; and the upper six ounces 16 per cent. Since 16 per cent. is the easiest per cent. with which to work, because it is the largest amount obtainable from a quart bottle, it has become most generally used. In order to work out a formula, for example 3 per cent. fat, 6 per cent. sugar, and 1 per cent. proteid, by means of well known rules of proportion, we find that in a 20 ounce mixture we would four ounces cream, two ounces skim milk, two ounces milk sugar, fourteen ounces water. This method, then, must be our main reliance, for by its use we can make up a formula containing almost any per cent. of these three cardinal ingredients that may be desired.

From the milk and cream we secure the desired amount of fat and proteid. The percentages of these ingredients may be varied at will and almost infinitesimally by means of very simple mathematical ratios. It is preferable to use the milk from a mixed herd rather than from a single cow for the simple reason that in this way we can more nearly approximate the average formula of cow's milk, which we must first know in order to work out the desired amounts in the miik mixture. The formula of cow's milk from an average herd is

4% fat 4.75% sugar 3.50% proteid

while human milk is

4 7 1.50

It must be borne in mind that, primarily, cow's milk was diluted and added to so as to make it conform as nearly as possible to the percentages in human milk.

It was very soon discovered that this was not all that was necessary, since there is a great difference between the infant's power to digest the ingredients of cow's milk and those of human milk. As a rule, the baby can take smaller proportions of the same ingredient in cow's milk than human milk and also, generally speaking, infants take a higher proportion of casein that it was once thought they could and smaller proportions of fat therefore a complete rearrangement is necessary, in which we are to be guided by the state of the child's nutrition, its weight and the examination of the stools. In order, therefore, to render the elements of cow's milk more digestible we make use of further resources.

Starches.—Starches are added to modified cow's milk for two reasons: either for their food value, which is usually slight, or more generally for their mechanical action in preventing the formation of hard casein curds. Starches, as all other ingredients, should be given in definite proportions according to indication, and usually not as a routine before the sixth month.

Alkalies.—The action of alkalies is not at present definitely known; however, they are generally used because it is supposed that they delay the process of coagulation and allow most of the milk to pass into the intestines from the stomach before coagulation takes place. They are more valuable therefore in gastric than in intestinal indigestion, and should also be used in definite proportion to the amount of cream and milk and not to the total quantity. The alkalies commonly used are lime water, sodium bicarbonate and sodium citrate; each of these has its votaries, but lime water remains the one most commonly used. I do not find the necessity for the routine use of any alkali.

Peptonization.—Some years ago, peptonization formed a very important part of infant feeding, but with the increased knowledge regarding the consistency and contents of the infant stools, we are usually able to correct the indiscretions of diet by chang-

ing the proportions of the food elements. There still remains a limited number of cases where peptonization for short periods of time undoubtedly does good. When used at all we usually start with complete peptonization and then gradually decrease both the amount of the peptonization materials and the time of peptonizing until we have returned to the raw product.

Whey.—In milk there are two principal forms of protein, the casein which is largely insoluble and the soluble proteid. It is frequently desirable to use a soluble proteid to the exclusion of the casein or in addition to it in larger proportion than would occur in the amount of skim milk used. For this purpose we make use of whey alone for longer or shorter periods of time or as a diluent in the milk modifications which gives us one of the most valuable resources in infant feeding that we possess. By this means we can give an article of diet which contains no fats but a definite proportion of sugar and a small amount of soluble proteid, which combination many infants can take who cannot assimilate anything else and, too, when they have returned to the products of whole milk it is frequently desirable to retain a larger proportion of the proteid in the soluble form of whey proteid.

Carbohydrates.—The principal carbohydrates used in infant feeding are milk sugar, cane sugar and malt sugar. Milk sugar being a normal content of both human and cow's milk was used for many years to the exclusion of all others and it still remains the most largely used form of sugar. However, there are many children who tolerate and even thrive on quite large proportions of cane sugar. Malt sugar has been used to a certain extent for a long time both among pediatricians and in the manufacture of many proprietary infant foods. Not until very recently, though, has its true value and definite indication been demonstrated. Undoubtedly many infants thrive on malt sugar better than on either of the other forms and, at least in my experience, it is clearly demonstrated that infants can take a higher per cent. of fat in the presence of maltose than in the presence of any other form of sugar. I think, as a general rule, infants tolerate a far larger percentage of all sugars than we have been in the habit of acknowledging. This fact is very clearly shown by the large number who have thriven on both condensed milk and several of the proprietary foods; in the one instance, the tolerance being for cane sugar and in the other for malt sugar.

Acids.—For all practical purposes the only acid used in infant feeding is lactic acid which in the form of buttermilk is at times a very useful adjunct to the armamentarium and which, according to indication, is made either from whole milk or from fat free skim milk. When the use of lactic acid is your object any strain of Bulgaricus may be used, but when buttermilk is used as a vehicle for the administration of lactic acid bacilli, there is a very limited number of strains available in this country which are of any service.

Precipitated Casein.—Precipitated casein has recently been given marked prominence through the very valuable studies of Finkelstein and his school. I do not think the indications for its use are altogether clearly understood, in spite of many authorities who hold the contrary opinion, but undoubtedly in cases of extreme carbohydrate intolerance, and especially in those cases where there is a combination of fat and carbohydrate intolerance, I think precipitated casein has a definite field of usefulness. This is especially true of the chronic cases of marasmus in older infants of the Finkelstein type, in whom there is usually carbohydrate and fat intolerance. There is also a limited field of usefulness in certain acute gastric conditions of younger children.

Stirilization and Pasteurization.—Primarily both of these methods are useful where the purity of the milk supply is in doubt, and when this is the case I invariably Pasteurize or boil the milk. Where pure milk is assured, neither is necessary. Occasionally, however, in the case of the hard casein curds in stools, with or without colic, boiling for even a limited period seems to inhibit their formation. The digestibility of the milk through these processes does not seem to be impaired, but in some instances seems rather to be increased. In other cases where it is deemed advisable to heat milk for any long period of time, it is wise to begin with the use of orange juice rather early for the prevention of possible scurvy.

Condensed Milk and Proprietary Foods.—Personally, I rarely find any indication for the use of either of these resources. In travelling long distances with an uncertain milk supply on the journey, I think one is justifiadle in using condensed milk, but even here, where milk laboratories, or at least certified milk, can be found in almost all large cities, assuring the preservation of milk for at least three or four days under proper conditions of handling, it would seem that its field of usefulness is again limited. The tolerance of infants to condensed milk apparently when other forms of modification have failed is undoubtedly dependent on the low fat and proteid plus a tolerance for cane sugar. In order to prove this, I have frequently given a child who seemed to furnish indications for condensed milk, a formula of modified cow's

milk exactly corresponding with the condensed milk dilution and found that they did equally as well. Alluding to proprietary foods, I, of course, allude to those only which are used with milk dilutions. These are undoubtedly dependent for their value on the malt sugar contained. The very wide use of both condensed milk and certain proprietary foods show, to my mind at least, as stated above, very clearly that infants have a higher tolerance for various sugars than we have hitherto supposed, but also suggests the very important caution that too high percentages of sugar may give rise very quickly to sugar intolerance which, when once established, is frequently very difficult to overcome.

In the course of these few remarks, I have alluded mainly to the feeding of healthy infants. The indications for the change of the various ingredients are quite definite to the careful student of child economy. The gastric digestion must always be observed most carefully, the weight frequently recorded and the stools inspected macroscopically, and microscopically whenever there is a definite indication. The scope of this paper does not admit of even the merest mention of indications in cases of badly upset indigestion. The calculation of the caloric value of the food which we are administering to a healthy infant is usually not necessary so long as digestion remains good and the stools normal, but as a check upon our various percentages a caloric valuation is a valuable aid and wherever digestive derangements occur is almost always necessary. Undoubtedly various infants require and tolerate widely differing amounts of food values, and therefore we cannot scientifically feed by the so called caloric method alone. But a definite ratio between the caloric value of one element to another in an infant's food has been shown by more recent investigations to be a very valuable procedure and it is not infrequent to find a child who does not gain on what appears to be the perfectly rational formula, and upon a calculation of the caloric value of the food we find the energy quotient is too high. The reduction of the food in accordance with this calculation usually results in an immediate gain in the weight.

The question of artificial feeding of infants, therefore, goes much further than one would be led to believe by the mere outline of resources given here. The personal equation enters into this more than any other problem of medicine and the physician who attempts the feeding of an infant must depend very largely on his experience and judgment, for "rule of thumb" cannot be applied at all in handling the bottle fed baby.

The questions of the interval of feeding and the amount of each feeding have always been mooted ones, the general guide having been the age and the weight. In the light of recent investigation with the X-ray our conceptions have undergone a radical change. The infant stomach has been shown to vary so much in capacity with the individual child that, apparently, age and weight have very little to do with it, and the time of emptying itself varies as much. This not only varies with the capacity of the stomach and the individual child, but also in very definite ratio with the ingredients used in the feedings. Personally, I have no fixed rule, or even an approximate one, as to the quantity or length of interval of feeding, but always endeavor to suit both of these to what appears to be the need of the individual child. For instance, one child does better on 2½ hour intervals, another on three, and still another on four hour intervals, the age and weight of all these children being approximately the same. The same observation applies to the quantities, one child may take 2½ ounces, another 4 ounces per feeding and apparently handle such an amount well.

Undoubtedly a considerable number of infants do well when fed empirically on almost any combination of resources. This is proveu in our practice so often that it calls for no further argument and a paraphrase of the old adage that "what is one's food is another's poison" applies very forcibly to the infant. And yet this does not furnish us with a reasonable excuse for not doing our best to feed in a careful, thoughtful and scientific manner.

To secure the best results in artificial feeding the physician must know the chemical composition of the ingredients of the resources which he employs, he must know, n a general way, their effect on infants, he must know what is an adequate gain in weight, what constitutes good digestion and what indigestion, and, above all, he must be able to recognize, through a careful examination of the stools, what particular ingredient is causing the trouble. The possession of this knowledge, as well as knowing the approximate amount of each ingredient which goes to make up the 24 hour feeding, will assure us, in most instances, a reasonable degree of success.

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

THE MEDICAL PROFESSION AND EUGENICS.

Members of the medical profession who pride themselves on being of that portion of the craft who are prone to listen, investigate, and think about new theories or things before giving their unqualified professional assent to a new proposition, merely because it happens to have as adherents names regarded with appreciation in the scientific world, are today watching with more than passing interest the attitude of the public, both educated and illiterate, toward the promoters of the beautiful, though at times impractical, theories of the advocates of eugenics.

Wisconsin enacted less than a year ago what the advanced enthusiasts regarded as a model law in the strictness of its requirements, but unfortunately in its actual workings it has, after a few weeks' trial, been found to be impractical, and the Supreme Court has just held it unconstitutional. The New Jersey statute of last year, providing for the sterilization of certain classes of criminals, has also recently been declared unconstitutional. With these practical examples before us, it behooves members of the medical profession who aspire to leadership in sociologic movements to study more carefully eugenic propositions with a view to the elimination of such features of attempted legislative enactment as do not merit the commendation of clear-headed, well-balanced, thinking doctors who are not carried away by the impetuosity of every new suggestion to better humanity by statute. It may well be considered, too, that the present eugenic fervor is in part a reflex of the general active interest so manifest in matters sexual to be seen on every hand just now. Considered in this light, it may well be questioned if the sober common sense verdict of the people is to approve of so much writing for and instruction of the masses of very young persons in matters sexual as the enthusiasts are advising.

Upon the whole, it is very manifest that while there are some principles of eugenics the public mind may be informed upon with benefit, it is yet very doubtful if the full revelations of the medical consultation room ought ever to become a part of the application for a marriage license, and it is equally doubtful if the women of the next generation are to be made truer wives, or better mothers, by having instilled into their minds in early adolescence, if not before, too intimate details of the sexual life and its proper regulation.

"THE MOTHER."

Knowledge of sexual and allied subjects is presented these days from the platform and in literature in a manner unblushing and bizarre. The dissemination of information on these subjects is doubtless a good thing but much of it is almost calculated to cause some of our puritanical forebears to turn over their ashes in their graves. Some of the magazine stories concerning maternity matters are, to the physician, absurd and wholly untrue to life. The technique and construction of a short story may be good from a writing point of view, and it may read well and appear on the surface to be plausible, but it may not bear the acid test of comparison to real life.

I have read in the February Cosmopolitan magazine a story called "The Mother" written by Leroy Scott. The main actors in this story are George and Katherine who get married and go to housekeeping, the same as quite a few other young people have done before. The maternal instinct is strong in Katherine and she longs for a baby. George puts her off on the grounds that their finances will not yet permit this luxury. As they get better established she shall have her baby, he tells her. But as George becomes promoted in business and therefore makes more money, he and his good wife have new social obligations to meet and they must entertain in a fashion befitting heir station.

Ever and anon Katherine asks if she can't have her baby now and on some pretext or other George puts her off from month to month and year to year. These people are mature in years and possess their share of knowledge of the world and how it is run; yet Katherine continues to beg for her baby. The writer, it seems to me, makes a little simpleton out of Katherine. There is implied the idea that all Katherine has to do in order to get a baby is simply to put in the order as they might order a victrola or a load of coal.

The reader naturally wonders what George and Katherine are doing to prevent conception. As there are no sure, safe and justifiable means of preventing conception, this story sets one guessing. Is it morally right for one to create the impression in a story that folks are practicing methods calculated to defeat nature?

But this story goes on and the folks are about ready to "have their baby." They have never for a moment questioned their ability to bring forth progeny. They haven't a thought of the numerous things that stand in the way of conception, especially when that desideratum is most desired. There may be a tightly adherent os; or again George may have sowed his wild oats before he met Katherine with the result that the vas deferens is hermetically sealed, so that spermatazoan cannot possibly travel down that thoroughfare. All the young folks think they have to do to obtain a baby is just to "have it."

The plot thickens. About the time George and Kate are thinking of putting in their order for a baby, something happens. Something just has to happen in a story, otherwise it wouldn't be a story. Katherine gets hurt in an automobile accident and is taken to the hospital, and afterward to her home. As she is convalescing the old and revered family physician drops in to see her, he is the one who ushered Kate into this world. She discloses to him her overweening desire —a baby. He looks her over a little and asks her a few questions. Then he looks wise and tells her she can't have a baby! The accident queered it all. What could have been broken? Does a little shaking up in an automobile put the reproduction system out of commission? Joy riders are not specially noted as being immune.

This may be "some story," as stories go. As a medical and scientific preachment it has many lame spots. One naturally feels sorry for Kate because she can't "have her baby." The majority of Kates are working overtime in the endeavor to keep from having them. W. T. M.

EDUCATING THE PUBLIC VIA THE DRAMA.

The drama is an ancient and honorable means of imparting useful instruction to the public. During the last year or so the stage has been used in a manner somewhat bold and bizarre to drive moral and sexual truths into the minds of the more or less unsophisticated lay world. The intent of many dramatists and producers is good and they have been actuated by high, altruistic motives in the presentation of plays having a moral or sexual angle. On the other hand, some have simply seized upon a popular propaganda in order to exploit their salacious wares under the name of morality and the uplift movement when their main purpose has been to ride on the crest of sensationalism.

I am more familiar with such plays from a rather wide browsing of literature and the ubiqutous reviews than from witnessing them before the footlights. In this short article I shall call brief attention to a few of these plays. "The Lure" is one of the numerous productions based upon the deplorable white slave traffic and it is one of the most recent. It has not been permitted to appear in several cities, which fact of course gives it good advertising and insures fair houses where it is tolerated. A part of the technique of this play seems to be based upon an absurd newspaper story. Some months ago we read in the public print of how the white slave villian secured his victim by means of a "poisoned needle." We were told that the needle was poisoned with hyoscine and when the wielder of it inserted it in the flesh of an unsuspecting girl in some public place she was at once overcome by the deadly drug and fell an easy victim to her seducer.

We all know how ridiculous this is, for hypodermic injections with even the most deadly drug cannot be accomplished in this easy manner. "The Lure" may on the whole teach a good lesson if it is approached in the right attitude of mind. Too often people attend these plays simply to feed their prurient minds rather than to be uplifted.

There was recently produced in Chicago a play which, I believe, is known as "The Natural Way." This is said to be a story having quite an obstetrical trend in the world-old matter of a girl seeking a doctor to destroy her unborn child. The doctor is a conscientious fellow with a real spine and he doesn't fall for any crooked game. In another somewhat similar play—similar in that it involves the sin of illicit love—a girl goes wrong and then blames it all on her mother because she did not instruct her daughter right and point out to her the path of virtue. Perhaps many mothers might be quickened to a sense of maternal duty by seeing such plays. Perhaps many girls might be benefited by witnessing them Ignorance is not always bliss, as we as physicians are painfully aware. And still, sometimes, such plays may only awaken new and perverse avenues of thought in the young and suggest ways and means by which they *think* they might sin and not be found out or be obliged to pay the awful penalty.

It is probable that "Madame X," in which the blighting influence of dope is so vividly protrayed, has done something toward discouraging the indiscriminate use of narcotic drugs. A woman undergoes mental and moral dissolution under the influence of ether. Etheromania is said to be gaining quite a foothold in this country and persons of low calibre readily resort to ether or chloroform in order to relieve in-

somnia and court forgetfulness. I have personal knowledge of individuals who are characterless and spineless putting ether in their cheap whiskey in order to hasten and augment a debauch. Such plays as the one named ought to set a horrible example before weak men and women.

"Damaged Goods" is the play in which the horrors of syphilis are fully set forth. The play may have an uncanny effect upon highly neurotic individuals and thus work harm in certain individual cases in the pessimism and melancholia it may produce. But on the whole, such a play teaches a powerful, wholesome and uplifting lesson and it is probable that it has done some good in the efforts directed toward the stamping out of this world-wide affliction. The drama can be utilized for impressing truths in a way peculiarly its own, but sensationalism and pruriency should be studiously avoided. W. T. M.

CALOMEL AS A BABY MEDICINE.

Mercury is, in my opinion and experience, the best baby medicine we possess. Ordinarily calomel is the best form by which to administer it. In some types of bowel trouble, especially those accompanied by a diarrhea, mercury and chalk is an excellent combination. In coughs and bronchial irritations calomel and ipecac is one of the best combinations that can be given.

There are few baby ailments in which calomel, judiciously administered, will not accomplish certain good results. It acts upon every secreting gland and cell, and is the most valuable cholagogue we possess, although acting indirectly as about all such agencies do. Calomel is therefore a most valuable intestinal antiseptic and is indicated in the majority of gastro-intestinal affections.

Occasionally a child manifests an idiosyncrasy for calomel and may manifest the same by overstimulation of the intestines, resulting in griping, tenesmus, etc. This is rare, however. As a general rule children tolerate relatively large doses, the reason being that the young child's secretions are more copious and mobile than that of the adult. Much of it is "lost" before it can exert any physiological effects. Young children are not subject to ptyalism and I have seldom had a child under the age of ten to manifest sore gums after taking the mild chloride of mercury.

The 1-10 grain tablets of calomel and wintergreen are all right for infants. They are also good for children a year old or more, provided enough are taken. I give it to children a year old in one grain doses and seldom in less than ½ grain doses. Having for twenty years depended on this drug as my one to "swear by" in babies, I have never had reason to "swear at" it. I have learned to give children calomel in free doses and I have never yet seen untoward results from my method of administration.

When it is desired to impress the young child's system with mercury, as in glandular affections, it is well to administer calomel in small doses, say 1-10 grain. I can't see how any smaller doses can exert any benign therapeutic effects. Calomel and castor oil are the best baby medicines, although like babies themselves, they are old-fashioned. W. T. M.

TRANSACTIONS TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

The fifteenth annual volume of transactions of this most excellent and useful medical association is at hand and gives evidence of much careful consideration on the part of both contributors and editor.

When this association was organized some 16 years ago there were carping critics who were opposed to organizing anything in the profession that did not first seek their approval, and others who honestly felt the existence of such a society would drain from the constituent State medical societies. Time has shown that both were mistaken and that the founders were fully conscious of the opportunity for such a society which has gone on quietly meeting annually alternately, in each of the three States, having always a goodly attendance, high grade papers, crisp, forceful discussions, pleasing social programs, all of which has been duly recorded in attractive annual volumes which have in the main, like the one before us, shown a grade of scientific medical work comparing favorably with the best medical societies in America. It is of more than passing interest to note, too, that meeting in midwinter, as the association has always done, it has helped rather than hindered in the development of the State societies, and the men who have been active in the Tri-State have invariably contributed much to help make their home State societies healthy and prosperous.

The volume contains as the frontispiece the genial face of the distinguished president at the Norfolk, Va., meeting last session, Dr. Arch E. Baker, of Charleston, S. C. His address followed by exactly fifty papers from members and visiting guests. All of these papers are useful contributions to the current literature of the profession, while some of them are of exceptionally high order. The Secretary, Dr. Rolfe E. Hughes, Laurens, S. C., has performed his

work well, and kept the annual volume of the Tri State fully up to the high standard set by his immediate predecessor.

The annual meeting of the Tri-State in 1914 will be in Wilmington, N. C., Feb. 18-19, and we are advised a most excellent program is being prepared, and a pleasant session promised.

Editorial News Items.

The recent annual communication of the Grand Lodge of Masons in session at Raleigh last week appropriated $500 to assist in the care of indigent members of the craft who desire to be sent to the State Sanitarium for Tuberculosis at Montrose, N. C. This, it is believed, is the beginning of a movement that is expected to become Statewide through the various fraternal, ecclesiastical and other similar organizations in North Carolina, which will result in extending the benefits of the institution to many more than could possibly be cared for with the State's appropriation.

Dr. Sydney Buchanan, recently resident physician in the Walker Memorial Hospital of Wilmington, N. C., has located to practice in Salisbury, N. C.

Dr. Cyril T. Wyche, of Prosperity, S. C., and a member of the legislature of that State, has just been elected speaker pro tem of the South Carolina House of Representatives now in session. Some very important public health legislation is asked for of this legislature, and it is believed the election of Dr. Wyche is propitious.

Dr. O. F. Eckel, of Asheville, is spending a few weeks in New York city attending the clinics.

The South Carolina legtslature now in session has defeated a bill modeled in a measure after the Wisconsin marriage statue providing for a medical examination of contracting parties prior to the issuing of a marriage license.

Dr. Isadore Schayer, of Laurens, S. C., has removed to Columbia, S. C., where he will practice in association with Drs. Barron & Barron. Dr. Schayer had achieved a most enviable reputation during his twelve years work in Laurens, and he carries to his new home a degree of prestage that should assure him success for the start.

Dr, S. A. Henley, of Asheboro, N. C., sustained a severe loss on January 21 by the partial burning or his residence, entailing a loss of $3,000.

The annual report of the James Walker Memorial Hospital Wilmington, N. C., just issued shows the institution treated the past year 1,383 patients, of whom 816 were white, and 68 colored. Of the white patients 630 were pay patients and 185 charity, while of the colored patients 470 were charity and 98 pay. The expenses were $40,209.41 and the income $38,058.37. The county of New Hanover contributes to the hospital $9,000 annually and the city of Wilmington $6,000.

The Rowan County (N. C.) Board of Health has adopted an order excluding children with tuberculosis from the public schools of the county.

Announcement is made from New York that the work of the Thompson-McFadden Pellagra Commission at Spartanburg, S. C., will be resumed March 1st. The expenses for another year, it is understood, Col. R. M. Thompson, of New York, has agreed to assume. Meanwhile there awaits a great opportunity for some wealthy philanthropist to permanently endow and equip a large special institution in the South for the study and care of pellagrins.

Dr. J. G. Pittman, of Gaffney, S. C., has returned home after a vacation spent in New York doing postgraduate work.

The building at Durham, N. C., formerly known as the Corcoran Hotel, is being remodeled and converted into a model hospital building. It will be opened shortly as the Mercy Hospital of Durham in charge of Dr. C. A. Adams and a selected staff of well known physicians of that city.

Dr. Thos. Stringfield, of Waynesville, N. C., State Inspector General of the North Carolina National Guard, will visit each of the 38 compauies of North Carolina troops in their home quarters and make the annual tour of inspection beginning January 31 and ending April 10.

Dr. P. O. Schallert, of Winston-Salem, N. C., was the recipient of severe injuries in a recent automobile accident, but is reported recovering.

Dr. J. P. Matheson, of Charlotte, N. C., has resumed practice after a vacation spent in postgraduate work in New York city.

Dr. H. R. Black, president of the Spartanburg Hospital, and a leading surgeon of Spartanburg, S. C., sustained a severe injury to his right arm by being thrown from his buggy against a telephone pole on Jan-

uary 15. Later he was carried to Philadelphia for treatment.

Work on the new addition to the State Hospital for the Insane at Morganton, N. C., is being rapidly pushed and it is hoped to have the building ready for occupancy by early summer. It will add 200 to the capacity of the institution.

Dr. Chas. A. Grote, of the Alabama State Board of Health, has been spending some time in examining the work of the North Carolina State Board of Health at Raleigh, N. C., and inspecting the work of local city and county boards at Asheville, N. C., and elsewhere in the State.

Dr. Chas. L. Hunsucker, of Drexel, has removed to Hickory, N. C., where he will continue practice.

Dr. G. D Gardner, of Asheville, is spending a few months in Chicago in postgraduate study.

Miss Nancy Loftain, of Asheville, became the bride of Dr. Wiley C. Johnston, of Canton, N. C., on January 1st at Asheville, N. C. After a bridal trip to Eastern cities the happy couple will be at home in Canton, where Dr. Johnson is regarded as one of the most promising of the younger men of the profession.

Steps were recently taken by the Baptists of South Carolina looking to the incorporation and institution at Columbia, S. C., of the Baptist State Hospital of South Carolina. Committees were appointed by the State convention of the churches of this important denomination, and it is thought the actual work of construction may begin in the early summer.

The annual meeting of the Iredell-Alexander County Medical Society was held at Statesville, N. C., January 5th, and the following officers elected: President, Dr. F. A. Carpenter; Vice-President, Dr. P. S. Easley; Secretary, Dr. J. E. McLaughlin.

The North Carolina State Board of Health has secured the services of Dr. J. R. Gordon, Jamestown, N. C., a State Senator of Guilford county, to visit all sections of the State and meet with the county medical societies, and others concerned in the practical enforcement of the new vital statistics laws, advising and instructing them as to its provisions, and endeavoring to secure their hearty co-operation in the securing an effective registration throughout the State.

The following card has been received:

Dr. Harlan Shoemaker
Suite 620-22 Marsh-Strong Bldg.
Main and Ninth Sts.
Los Angeles,
Cal.
Jan. 1, 1914 Practice limited to Surgery

Dr. W. L. Grantham, of Lumberton, N. C., is spending a few months in New York making a special study of the diseases of women and children.

Married at St. John's Lutheran Parsonage in Concord, N. C., on January 21, 1914, Dr. J. J. Bunn, a leading young physician of Mt. Pleasant, N. C., to Miss Lucile Kindley, of Concord, N. C.

Dr. F J. Clemenger, of Asheville, N. C., sailed for London, England, January 31, to spend three months studying the laboratory of Sir Almoth Wright. Dr. Clemenger spent a year with Sir Almoth some three years ago and returns to farther prosecute his studies under this eminent English pathologist.

Dr. J. B Smart, of Forest City, N. C., is taking a special course in ophthalmology at the Chicago Eye and Ear Clinic.

Dr. B. B. Steedly, of the Steedly Hospital at Spartanburg, S. C., has been tendered the position of Chief Surgeon to the State Baptist Hospital which leaders of the denomination propose starting in Columbia, S. C., shortly.

The legislature of South Carolina has appointed a committee to investigate the conduct of the State Insane Hospital at Columbia, S. C

Dr. J. W. Long, of Greensboro, N. C., has agreed to furnish the funds for the erecting of a hospital at a suitable place in Africa under the control of the Methodist Episcopal Church, South, for the study and treatment of sleeping sickness and other special diseases incident to that section. The hospital will be known as the Mary Long Memorial Hospital, being named in memory of the deceased daughter of the physician.

The finance committee of the South Carolina Senate now in session has approved a bill carrying an appropriation of $35,000 for the establishment of a pellagra hospital in that State. Much interest is manifested, and it is expected to pass both houses and become a law.

Dr. Branch Craige, formerly of Salisbury, N. C., but now of El Paso, Texas, was married on January 20, 1914, to Miss Elsie Betty Hohiberg, of that place. Dr. Craige is one of Carolina's brainy young men who took Horace Greely's advice and went West. He has succeeded finely in his new home, and the Journal wishes him and his charming bride every joy and comfort of life.

Dr. Wyatt Clinton Boylston, of North, S. C., and Miss Lucile Elbert Cooner were married on the evening of the 26th of January. The wedding took place at the home of the bride's parents in Batesburg, S. C. Immediately after the ceremony a buffet luncheon was served, after which Dr. and Mrs. Boylston left in an automobile for a short trip.

The physicians of McCormick, S. C., are agitating the matter of a hospital for their town. It has been estimated that a comfortable, up-to-date plant, adequate for a town the size of McCormick, could be put in working order at a cost of $15,000. From the present outlook, it would seem thot McCormick will get the hospital, and if the citizens of the town come to the aid of the medical men it is almost a certainty.

Dr. G. E Young, a prominent physician and business man of Forest City, N. C., died at his home on January 30. His death in all probability was due to a third stroke of paralysis which he suffered the previous day. Dr. Young was seventy years old. He served two years in the war between the States and soon after its close entered the Jefferson University of Philadelphia, graduating in 1870, when he returned to his home for the practice of medicine. He was an excellent physician as well as a good business man and was constantly in demand, not only in his own county but in adjoining counties. His hosts of friends will miss him.

A ten story skyscraper is to be built in Columbia, S. C., and will be used mainly by medical men. The idea seems to be, that of affording suitable offices for men of the medical and dental profession, and giving them the advantage of modern equipments in furnitue and fixture, and enabling them to have at their disposal the latest aids in medical treatment. The building will be located within a block of the new postoffice site, and, with the lot, will represent an investment of about $150,000.00.

At a recent meeting of the Mecklenburg Medical Society, the following officers were elected:—

President, Dr. C. F. Walker; 1st Vice-Pres., Dr. B. C. Nalle; 2d Vice Pres., Dr. C. M. Trippe; 3d Vice Pres., Dr. J. S. Clifford; Sec. & Treasurer, Dr. Otho B. Ross; Censor, Dr. J. L. Ransom; Delegates State Society, Doctors J. P. Munroe, R. L. Gibbon and L. F. Hovis. Alternates, Doctors J. R. Irwin, J. Q. Myers and W. Allan.

The Greenwood Hospital recently received a gift of $5,000.00 from Mr. William H. Bailey, of Greenwood, S. C. This enables the institution to free itself of debt. Mr. Bailey had intimated some time ago, to the ladies who have been trying to rid the hospital of this debt, that he intended to make this gift. The only condition attached to it is, that the place be always used as a hospital. In the event that the hospital is ever abandoned the sum given by him must be returned to his estate.

Dr. L. A. Merrimon, of Asheville, is spending a few weeks touring the West Indes.

The "Weston Bill" for the medical inspection of schools in South Carolina passed the Senate February 5th and is expected to find favor in the lower house. It has the solid support of the State Board of Health and the South Carolina State Medical Society, and is a wise, progressive and highly proper measure and should became a law of that good State without delay.

The forthcoming meeting of the Southeastern Sanitary Association in Columbia, S. C., bids fair to be a success. President J. A. Haynes announces a programme containing some most excellent addresses by men recognized as authorities.

The death of Dr. Wistar W. Wilson a, the age of 63 at his home in Williamston S. C., removes from service in that comt munity a safe, conservative and efficient practitioner of many years' experience and a wise counsellor and patriotic citizen. A deacon for a long period in the Baptist church, a member of fraternal societies, as well as a wise and trusted counsellor, he will be greatly missed in his former circle of activity.

Preliminary Announcement and Partial Program Sixteenth Annual Session Tri-State Medical Association of the Carolinas and Virginia.

WILMINGTON, NORTH CAROLINA,

February 18-19, 1914.

OFFICERS SESSION 1914.

Dr. Southgate Leigh, Norfolk, Va., President.

Dr. Augustus B. Knowlton, Columbia, S. C., Vice President.

Dr. Alfred L. Gray, Richmond, Va., Vice-President.

Dr. Andrew J. Crowell, Charlotte, N. C., Vice-President.

Dr. Rolfe E. Hughes, Laurens, S. C., Secretary-Treasurer.

EXECUTIVE COUNCIL.

Dr. J. Shelton Horsley, Richmond, Va.
Dr. R. B. Epting, Greenwood, S. C.
Dr. D. A Stanton, High Point, N. C.
Dr. Jas. H. Culpepper, Norfolk, Va.
Dr. Samuel Lile, Lynchburg, Va.
Dr. A. E. Baker, Charleston, S. C.
Dr. Charles T. Harper, Wilmington, N. C.
Dr. W. W. Fennell, Rock Hill, S. C.
Dr. J. Howell Way, Waynesville, N. C.

COMMITTEE OF ARRANGEMENTS—SESSION 1914.

Dr. C. P. Bolles, Dr. S. E. Koonce, Dr. Tate Moore, Dr. E. S. Bulluck, Dr. J. B. Gwin, Dr. W. H. Moore, Dr. M. M. Caldwell, Dr. J. G. Murphy, Dr. J. C. Wessell, Dr. Charles T. Harper, Chairman.

CHAIRMEN OF SECTIONS.

Virginia:

Dr. C. L. Nottingham, Medicine, Cape Charles, Va.

Dr. S. S. Gale, Surgery, Roanoke, Va.

Dr. J. W. Dillard, Gynæcology, Lynchburg, Va.

Dr. J. N. Upsher, Obstetrics, Richmond, Va.

Dr. W. E. Driver, Eye, Ear, Nose and Throat, Norfolk, Va.

North Carolina:

Dr. E. C. Register, Medicine, Charlotte, N. C.

Dr. D. T. Tayloe, Surgery, Washington, N. C.

Dr. Jos. Graham, Gynæcology, Durham, N. C.

Dr. D. A. Stanton, Obstetrics, High Point, N. C.

Dr. H. W. Carter, Eye, Ear, Nose and Throat, Washington, N. C.

South Carolina:

Dr. A. M. Brailsford, Medicine, Mullins, S. C.

Dr. A. B. Knowlton, Surgery, Columbia, S. C.

Dr. G. A. Neuffer, Gynæcology, Abbeville, S. C.

Dr. R. B. Epting, Obstetrics, Greenwood, S. C.

Dr. J. W. Jervey, Eye, Ear, Nose and Throat, Greenville, S. C.

INVITATION COMMITTEE.

Dr. Southgate Leigh, (ex-officio), Norfolk, Va.
Dr. Stephen Harnsberger, Catlett. Va.
Dr. J. Howell Way, Waynesville, N. C.
Dr. A. E. Baker, Charleston, S. C.
Dr. A. K. Tayloe, Washington, N. C.
Dr. E. E. Field, Norfolk, Va.
Dr. J. H. McIntosh, Columbia, S. C.
Dr. W. P. Timmerman, Batesburg, S. C.
Dr. C. V. Reynolds, Asheville, N. C.

INFORMATION.

The Sixteenth Annual Session of the Tri-State Medical Association of the Carolinas and Virginia will be held at Wilmington, N. C., February 18-19, 1914. This promises to be an unusually good meeting and a large attendance is expected. The scientific part will be of a high order and the hospitality for which the city of Wilmington was always noted is confirmed by the announcement of social events for both days, to the visiting doctors and many other inducements to insure a pleasant as well as profitable meeting.

The following hotels with moderate rates are announced: "The Orton" (American); "The Colonial Inn" (American); "The Purcell," "The Southern," and "The Atlantic," (European). "The Orton" will be recognized as headquarters.

Authors intending to contribute papers will please send titles at once to the Secretary for proper place on final program.

For further information address Dr. Chas. T. Harper, Wilmingtan, N. C., or Dr. Rolfe E. Hughes, Secretary-Treasurer, Laurens, S. C.

PRELIMINARY PROGRAM.

Wednesday, February 18, 10 A. M.

Place of meeting, Assembly Hall, Elks Club.

Called to order by Dr. Chas. T. Harper, Chairman Committee of Arrangements.

Divine Invocation—Rev. Wm. E. Cox, Rector of St. Johns Episcopal Church.

Address of Welcome to City—Hon. P. Quince Moore, Mayor of the City.

Welcome on Part of the Profession—Dr. W. C. Galloway.

Response—Dr. Wm. Weston, Columbia, S. C.; Dr. Wm. E. Anderson, Farmville, Va.

Sixteenth annual session of the Tri-State

Medical Association declared opened and Dr. Harper presents Dr. Southgate Leigh the president.

Address of the President, Dr. Southgate Leigh.

A Few Prominent Doctors Who Will Read Papers:

Dr. H. A. Royster, Raleigh, N. C.
Dr. Robt. C. Bryan, Richmond, Va.
Dr. A. B. Knowlton, Columbia, S. C.
Dr. Michael Hoke, Atlanta, Ga.
Dr. LeGrand Guerry, Columbia, S. C.
Dr. J. Hill Tucker, Charlotte, N. C.
Dr. Addison G. Brenizer, Charlotte, N.C.
Dr. J. W. Jervey, Greenville, S. C.
Dr. Mary Lapham, Highlands, N. C.
Dr E. W. Carpenter, Greenville, S. C.
Dr. B. B. Steedly, Spartanburg, S. C.
Dr. Beverly R. Tucker, Richmond, Va.
Dr. Thompson Frazer, Asheville, N. C.
Dr. G. A. Neuffer, Abbeville, S. C.
Dr. R. L. Payne, Jr., Norfolk, Va.
Dr. G. P. Neel, Greenwood, S. C.
Dr. James K. Hall, Richmond, Va.
Dr. Geo. T. Tyler, Jr., Greenville, S. C.
Dr. Wm. Allan, Charlotte, N. C.
Dr. A. M. Whisnant, Charlotte, N. C.
Dr. W. W. McKenzie, Salisbury, N. C.
Dr. J. W. Long, Greensboro, N. C.
Dr. J. G. Murphy, Wilmington, N. C.
Dr. Albert Anderson, Raleigh, N. C.
Drs. A. J. Crowell and J. P. Munroe.

The above is only a preliminary announcement of papers to be read at this meeting. We understand that many other papers by prominent physicians and surgeons in the Carolinas and Virginia will be added to this list in the permanent program, also about ten papers from very eminent physicians and surgeons from New York, Chicago, and other large cities will be read.

BOOK NOTICES.

Anatomy and Physiology. A Text-Book for Nurses. By John Forsyth Little, M.D., Assistant Demonstrator of Anatomy, Jefferson Medical College, Philadelphia. 12mo., 483 pages, with 149 engravings and 4 plates. Cloth, $1.75, net. The Nurses' Text-Book Series. Lea & Febiger, publishers, Philadelphia and New York, 1914.

This concise work presents all the essential points of anatomy and physiology, which the nurse must have at command for the proper comprehension of her professional duties. The author's style is clear and untechnical, and no theories have been included except those which have been definitely accepted by teachers of these subjects. Emphasis has been placed on the descriptions of organs and their functions which are of fundamental importance in the practical work of the nurse. The volume is extremely well organized, and the judicious use of heavy-faced type brings out in their proper relations the various headings and sub-heads according to their importance. The illustrations are very unusual in their excellence; many of them are taken from Gray's Anatomy, and these have the names of the parts engraved directly on the face of the cut, so that each part, its relations and extent are manifest at a glance. At the end of each chapter there is a list of questions which serves to impress upon the mind the salient points in that chapter. At the end of the book there is a table of weights and measures, a full glossary, and an admirable index. This work stands alone in its efficiency as a teaching instrument in the nursing field.

Clinical Diagnosis and Uranalysis. By James R. Arneill, A.B., M.D., Professor of Medicine and Clinical Medicine in the University of Colorado, and Physician to the Denver County Hospital and the St. Joseph and St. Luke's Hospitals of Denver. New (2d) edition, revised and enlarged. 12mo., 270 pages, with 83 engravings and a colored plate. Cloth, $1 00, net. The Medical Epitome Series. Lea & Febiger, publishers, Philadelphia and New York. 1914.

In the day of the treatise and the monograph it again is a distinct achievement, even for Dr. Arneill's skilled hand, to bring so extensive a subject as Clinical Diagnosis within the compass of an "Epitome." In addition to the customary tests of the blood, stomach contents, feces, sputum and urine, space is found for such procedures as Wright's coagulation test, cryoscopy, tests for anæmia, leukemia, trypanosomiasis and leukocytosis, Thalman's gonococcus stain and spinal fluid tests for albumen and dextrose. The revision embodies all the recent advances. Particularly practical and timely are the sections on the examination of the stomach contents, and on serum reactions, including discussions of the Widal, Wassermann, Noguchi, butyric-acid and cobra venom tests. In each case due attention is paid to the normal as well as to the pathological constituents, and the necessary apparatus is carefully described. The illustrations are chosen with excellent judgment. The frequent bibliographical references are incentives to wider reading, and the questions at the end of each chapter serve to fix the important points in the reader's mind.

This work is worth many times its price to the student, the practitioner and the student alike. It helps the student to crys

tallize his impressions, throughout the term as well as at examination time; it enables the practitioner to refresh his memory and keep in touch with all the salient advances, and the specialist to clarify his perspective and readjust his sense of values.

Transactions of the Thirty-Fifth Annual Meeting of the American Laryngological Association held at Washington, D. C., May 5th, 6th and 7th, 1913. New York: Published by the Association, 1913.

This volume contains some very valuable papers indeed, some of which are illustrated. No pains have been spared to make it attractive in every way.

Practical Medicine Series. Under the general editorial charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume IX. Skin and Venereal Diseases, Miscellaneous Topics. Edited by W. L. Baum, M.D., and Harold N. Moyer, M.D. Series 1913. Chicago: The Year Book Publishers, 327 S. La Salle Street.

Practical Medicine Series. Under the general editorial charge of Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume X. Nervous and Mental Diseases. Edited by Hugh T. Patrick, M.D., Professor of Neurology in the Chicago Policlinic, Clinical Professor of Nervous Diseases in the Northwestern University Medical School; Ex-President Chicago Neurological Society. Peter Bassoe, M.D., Assistant Professor of Nervous and Mental Diseases, Rush Medical College. Series, 1913. Chicago: The Year Book Publishers, 327 S. La Salle Street.

These two books constitute the last two volumes of a series of ten which are issued at about monthly intervals and cover the entire field of medicine and surgery. Each volume is complete for the year prior to its publication on the subject of which it treats. This series is published primarily for the general practitioner, yet the arrangement is several volumes enables those interested in special subjects to buy only the parts they desire.

Price of these volumes, $1.35 each. Price of series of ten volumes $10.00.

Transactions of the Nineteenth Annual Meeting of the American Laryngological, Rhinological and Otological Society. Held in Washington, D. C., May 8th, 9th and 10th, 1913. Published by the Society, 1913.

This volume of the Transactions is quite well arranged and is very complete. The papers contained in it are a credit to the Society.

Studies in Cancer and Allied Subjects. The Study of Experimental Cancer. A Review by William H. Woglom, M.D., Assistant Professor Columbia University, Assigned to Cancer Research Fund at Columbia University. Volume 1. New York. Columbia University Press, 1913. All rights reserved.

The illustrations in this volume are profuse and, as they are excellent, add quite a great deal of value to the book. The subject of the cancer is one that is very interesting and in this volume it is dealt with in an admirable manner. The volume is one that the reviewer takes a great deal of pleasure in recommending.

Diseases and Deformities of the Foot. By John Joseph Nutt, B.L., M.D., Surgeon-in-Chief, New York State Hospital for the Care of Crippled and Deformed Children; Surgeon Sea Breeze Hospital; Assistant Attending Surgeon, in Charge of Orthopedic Cases, Willard Parker Hospital; Member of the American Orthopedic Association. Illustrated. New York: E. B. Treat & Company, 241-3 West 23rd St., 1913. Price $2.75.

This volume is one that will prove of great value to the general practitioner. By a careful study of it, he will be enabled to do much toward preventing deformities, and correcting abuses and conditions which have already occurred. The severe cases will always have to go to a specialist but this volume will enable a physician to tell which cases should be treated by a specialist. There are any number of deformities which may be cured by the ordinary physician by simple measures.

There are one hundred and one illustrations contained in this book, all of them good and all instructive. It is a well bound and well arranged book.

The Door That Has No Key. By Cosmot Hamilton. New York: George H. Doran Company.

This novel, instead of giving the romance of a young couple before marriage, tells the story of their married life. It is an up-to-date story in every way, written in a clear flowing style. We see in it the indiscretion of the woman who loved too little and the discretion of the man who loved too much. Price $1.25.

Medical and Surgical Reports of the Boston City Hospital. Sixteenth Series. Edited by Geo. H. Monks, M.D., Geo. G. Sears, M.D., and F. B. Mallory, M.D. Boston: Published by the Trustees, 1913.

The present volume of Medical and Surgical reports is the first that has been published since 1905. It contains a collection of papers by members of the Staff, some of which are now appearing for the first time, while others are reprints of articles published elsewhere. The editors are to be congratulated upon getting out such an interesting and valuable volume.

Anatomy and Dissector In Abstract. By Stewart L. McCurdy, A. M.. M. D., Professor of Anatomy and Surgery University of Pittsburgh;Orthopedic Surgeon Presbyterian and Columbia Hospitals; Surgeon P. C. C. & St. L. Railway; Member American Medical, American Orthopedic,Pennsylvania State Societies. Pittsburgh,Pa. Fourth Edition. Published by Medical Abstract Publishing Company, 8103 Jenkins Arcade Bldg., Pittsburgh, Pa.

Anatomy in Abstract has been in such great demand that it was necessary to issue the fourth edition. The book has been thoroughly revised and the little errors which crept into former editions have been eliminated in this one. The "Dissector" serves as an index to Anatomy in Abstract and makes the little volume much more valuable.

The book is in a durable binding and of a size that fits in your pocket.

The Intervertebral Foramen. An atlas and histologic description of an intervertebral foramen and its adjacent parts. By Harold Swanberg, Member American Association for the Advancement of Science. With an introductory note by Prof. Harris E. Santee. Illustrated by 16 full page plates, none of which have ever before appeared in print. Chicago Scientific Publishing Co., S. W. Corner Grace and Osgood Streets, Chicago, Illinois.

This book is the first and only scientific work on this subject. It contains an atlas and histologic description of the intervertebral foramen and adjacent parts,with special reference to the relations of the nervous structures.

During the past quarter of a century a great deal of attention has been directed to the spinal column from a therapeutical standpoint. Many systems have arisen claiming that the great majority of diseases have their origin from various spinal abnormalities, which result in producing pressure, or other phenomena, to the nerves in the intervertebral foramina. In this volume the author presents in a clear and concise manner the histologic structure of this part with special reference to the relations of the nervous structures. It is a work that every physician should have.

It is illustrated by sixteen beautiful full-page plates printed on the most expensive engraver's proving paper, none of which have ever appeared in print, having been especially prepared for this work. The text is printed on fine book paper and contains 101 pages. Price $3.00.

General John Regan. By G. A. Birmingham, author of "Spanish Gold," "The Adventures of Dr. Whitty," "The Search Party," "Lalage's Lovers," etc. George H. Doran Company, New York.

This novel is one of the best that the author has written. His play, General John Regan, founded on this novel is one of the notable successes of the season in London, and is now being produced in America. The comedy and high spirits of both the novel and the play are irresistible and tonic. Price $1.20.

Transactions of the American Gastro-Enterological Association. Sixteenth session held at Washington, D. C., May 5th and 6th, 1913. Printed for the Association, St. Louis, 1913.

It always gives the reviewer pleasure to look through the Transactions of this Association. The present volume has been gotten up very carefully and is quite an attractive and interesting book.

President Wilson's "Trust" Message.

The message itself, as read on Tuesday, the 20th, was in some respects the most statesmanlike of all President Wilson's utterances thus far. It was in perfect temper, lifted far above contention, and had the unusual merit of being explicit while also philosophical. It found the opinion of the country upon trusts and monopolies to be clearing up and ready for action. "Constructive legislation, when successful, is always the embodiment of convincing experience and of the mature public opinion which finally springs out of that experience." "The antagonism between business and government is over. We are now about to give expression to the best business judgment of America, to what we know to be the business conscience and honor of the land." The President continued to show that he meant to have "easy and simple business readjustments, * * * nothing torn up by the roots, no parts rent asunder which can be left in wholesome combination." The practical measures proposed would deal with interlocking directorates; this would result in "independent industrial management working in its own behalf." Next the President proposed to confer upon the

Interstate Commerce Commission the power to regulate the financial operations of transportation companies, a measure, as he well says, that the country is ready to accept "with relief as well as approval." Next he asks "further and more explicit definition of the policy and meaning of the existing anti-trust law." This point he proceeds to set forth with unanswerable logic. The next item in the program is the creation of an interstate trade commission. Its need to the business world is admirably set forth. Finally, the President holds that prosecutions under the anti-trust law should not be directed against business and its organization, but against individuals who have been guilty of offences. Certain other questions and suggestions in the message are of great pertinence; but the points we have enumerated form the constructive program offered by the President.—From "The Progress of the World," in the American Review of Reviews for February.

Many-Times-Told Tales.

From "The Story Corner" by Sarah Comstock in the February St. Nicholas.

Of course many of the children in all the cities are extremely well fed at home in respect to stories; but you don't find them staying away from the libraries just because of that! If you had heard "The Three Golden Apples" fifty times, couldn't you listen to it for the fifty-first? I'll wager you could! And there's no such thing as ever tiring of "The Shooting Match at Nottingham Town" or "The King Who Was a Gentleman." To hear a trained story-teller give one of your favorites is like hearing music you know and love sung by a delightful voice.

You know story-telling was one of the first arts developed in the world. Stories were told, passed from mouth to mouth, before men learned to write them down and make books. And now that this custom is arising so strongly again, some one has called it "the oldest and the newest of the arts."

Abstracts of the Leading articles of the month.

Treatment of Intestinal Toxemia.—McIlroy (Glasgow Medical Journal) says that the first essential in taking up the treatment is to have the mouth put in a healthy condition, the teeth being gone over by a dentist and the gums disinfected with tincture of iodine or by ionic medication. As for the diet, dry meals are often of benefit, copious draughts of water being taken, however, between meals and in the early morning. A plentiful supply of fat in the form of butter is of value. Green vegetables are difficult of digestion. In some cases of marked toxemia, even of the chronic variety, it is necessary to put the patient on a milk diet for several weeks. In severe forms, too, it should be borne in mind that small and frequent meals are preferable to large meals at long intervals.

Exercises to strengthen the abdominal muscles are of great value, e.g., lying flat on the floor and raising the trunk to a sitting posture without the aid of the arms; lying flat and raising the legs perpendicularly; standing straight with the feet close together and bending forward until the fingers nearly or quite touch the ground. These exercises are best performed after the morning bath, and each should be repeated about a dozen times. Abdominal belts or binders are of benefit in many cases, their object being to prevent the downward pressure of the viscera and lend support to the abdominal walls. In women of the hospital class, the author advises a broad binder of new flannel, carefully applied with safety pins while the patient is recumbent.

In regard to medicinal treatment, he lays stress upon the avoidance of frequent doses of purgatives in chronic cases, though occasionally calomel and other drugs have to be given for diagnostic and surgical purposes, as well as in acute conditions. In cases of obstinate intestinal stasis, he has had excellent results from the following procedure: On rising in the morning the patient takes a tablespoonful of pure liquid paraffin, about half an hour or more before breakfast. This acts as an intestinal lubricant, and prevents septic absorption. After breakfast the patient must go daily to stool whether defecation takes place or not, and in time will find that a regular bowel movement results. Sometimes an additional dose of the liquid paraffin is given at bedtime, if required.

Natural mineral waters may be given, and in cases of fecal accumulation, a small enema of olive oil at bedtime is of benefit. The author has at times employed pituitary extract for chronic constipation, and has found it of value, whether given hypodermically or by mouth.

Where an obvious lesion is present, or where all other measures have been tried without success, due consideration should be given to the benefit to be gained by short circuiting operations between the small and large intestine, or even the removal of part of the latter.

The Wassermann Reaction and Mental Disease.—Hermann and Hollander (Bull de l'Acad. de Med. de Belgique). They employed the original method and not any of its later modifications. One hundred and fifty patients were admitted, and for various reasons 14 were not tested. Of the 136 remaining 21 were general paralytics, and all gave a positive test; 15 others also gave a positive reaction, and the mental diseases from which they suffered were very various. Three were cases of dementia præcox out of a total of 22; 2 were senile dements out of 13; and 2 were cases of degeneration and disequilibration out of 2 such cases. The others were single instances only. This gives a total percentage of 26.47 in all cases examined. Another examination was carried out for a second year in all cases of general paralysis which came under their notice. Of these, including the 21 already mentioned, there were 62, and 56 gave a positive reaction, a percentage of 90.32. In the 6 negative cases the diagnosis was not open to much doubt, being confirmed in at least 2 cases by post-mortem examination. In other two cases the test was negative once, but was positive on a subsequent test. In two of those which gave a negative test syphilis had previously with certainty been acquired. There are, therefore, cases of undoubted syphilis which give a negative reaction. The 15 non-paralytic cases are shortly described, and it is concluded that the existence of syphilis was only an incidental factor. The relation of other tests to the Wassermann reaction was also studied, and the results are recorded. These other tests were applied to the cerebro-spinal fluid in three ways—the Wassermann reaction, the counting of the lymphocytes, and the estimation of the amount of globulin. A table is given showing the results of all these tests in certain non-paralytic cases.

The conclusions come to are:—From the point of view of etiology and diagnosis a negative reaction has no significance. The reaction is of the greatest service in confirming the diagnosis of general paralysis. Only clinical observation is of service in differentiating general paralysis from cerebral syphilis and syphilitic dementia. The absence of pathological changes in the cerebro-spinal fluid, with a positive reaction in the blood does not exclude the possibility of the existence of syphilitic arterio-schlerosis as a cause of mental symptoms. The testing of the cerebro-spinal fluid is of great assistance in throwing light on obscure cases, especially on dementia at advanced ages.

Progressive Epileptic Myoclonus.—Jacquiri and Marchand (L'Enceph). The patient was a girl of 19. At the age of 3 she had had a few convulsive seizures. When ten years old she began to suffer from epileptic fits as the result of a fright. At first they were infrequent, at intervals of six months. As time went on they became more and more frequent, in the end occurring nearly every day. The myoclonic attacks began about five years after the epilepsy and were present in the face, lips, tongue, and extremities, especially the hands. The speech resembled somewhat that of a general paralytic. This disease could, however, be definitely excluded for various reasons. The muscular contractions were rapid, sudden, forcible, analogous to that produced by the electric discharge. They varied in intensity and were not painful nor systematised. The flexors were more markedly affected than the extensors. They disappeared during sleep, and were only very slightly under voluntary control. They usually appeared before the fit and got gradually more severe until the fit occurred, when they passed off, and remained in abeyance till the approach of the next fit. The cerebro-spinal fluid was withdrawn for purposes of examination and was found to be under very considerable pressure. When the fluid (10 c.c.) had been withdrawn it was noticed that the muscular twitchings were lessened. During her residence in the asylum—a period of twenty-one months—lumbar puncture was performed forty-three times without untoward results. The fits, as well as the twitchings, were reduced in number and severity, and on every occasion the pressure was found to be very considerably above the normal. In the course of time phthisis developed and progressed rapidly, the patient dying 21 months after admission.

The post-mortem examination did not reveal any characteristic naked-eye change. On microscopic examination of various convulsions there was found to be considerable atrophy of the ganglion cells of the cortex. The giant cells were markedly smaller than normal, and the chromophile granules were powdery and disseminated throughout the body of the cell. The dendrites were small, and there was no undue pigmentation. The vessels appeared healthy. The tangential fibres were atrophied, and especially at the bases of sulci there was a marked development of delicate fibres traceable to neuroglia cells. The pia tended to adhere in that situation. Two figures are given showing these morbid changes. The cells of the anterior horns of the cord showed the same changes as the motor cells of the cortex. The patho-

logical conditions found in this case resemble those previously described in three cases by Rossi and Gonzales. The authors are inclined to attach most significance to the degeneration of the cortical motor cells, the atrophy of the tangential fibres, and the superficial sclerosis. They somewhat resemble the changes usually found more extensively and intensively in general paralysis, in which disease muscular twitchings in restricted areas are very common.

The Micro-Organism Causing Epidemic Poliomyelitis.—Flexner and Noguchi (Jour. of Exper. Med.) have succeeded in cultivating a micro-organism which would appear to be etiologically related to epidemic poliomyelitis as it occurs in human beings and monkeys. Attempts to demonstrate the micro-organism of epidemic poliomyelitis have hitherto proved unsuccessful. The claims made for the mirococcus cultivated by Giersvold from the cerebro-spinal fluid, and for the bacillus described by Dixon, Fox, and Rucker in the circulating blood of patients affected with acute poliomyelitis, were finally disposed of when it was demonstrated by Flexner and Lewis, and independently by Landsteiner and Levaditi, that the causative agent was filterable. This observation, made in 1909, discouraged further attempts at cultivation. The authors have succeeded, however, where others have failed, by applying the new method devised by Noguchi, by means of which he has successfully cultivated spirochætæ.

The method of cultivation and the appearances presented by the cultures are described in detail and figured. Fresh specimens derived from human beings and from monkeys experimentally inoculated, and glycerinated specimens from both sources, were employed. The culture medium consisted essentially of human ascitic fluid, and in obtaining the initial culture the exclusion of oxygen is necessary. The numerical results of cultivation are summarised as follows: "In a series of thirty-three experiments with the nervous tissue of monkeys, comprising thirteen specimens of brain tissue, two of brain emulsion, and eighteen filtrates of brain and spinal cord from twenty-four animals infected from two different strains of human poliomyelitic virus, an initial growth was obtained in nineteen instances, of which sixteen proved to be pure and three mixed cultures. Of these, pure sub-cultures were obtained thirteen times—namely, eight times from brain tissues, four times from filtrates, and only once from emulsion. In a second series, in which human nervous tissues were directly employed, eight successful cultivations were secured; one was from fresh tissue, three were from recently glycerinated tissues, and four from tissues which had been glycerinated for many months. In two specimens of the last four initial cultures but no subcultures were obtained. In all the others subcultures resulted, and were maintained for an indefinite period." The organisms when viewed under the dark-field microscope in fluid cultures appear as minute bodies, globular in form, hanging together in short chains, pairs, and small masses. They are devoid of independent motility, and distinguishable with difficulty among the indefinite granules present. The two methods of staining which have proved most satisfactory so far are those of Giemsa and Gram. Inoculation of the cultures was followed by the clinical and pathological effects characteristic of experimental poliomyelitis in the monkey, and it was further found that the central nervous system of the monkeys in question could be employed both for recultivation of the micro-organisms inoculated and for transmitting the experimental affection to still other, and probably an indefinite series of, monkeys. Further, the micro-organism can be detected by means of a special staining method devised by Noguchi, and which is described in detail in the present paper, both in film preparations and in sections prepared from the central nervous system of human beings who have succumbed to poliomyelitis and in the central nervous system of monkeys in which poliomyelitis has been experimentally produced. Thus the organism was demonstrated in the films in eighteen out of nineteen specimens of glycerinated human nervous tissues, either in pairs or in small aggregated groups between the cells, and in some instances within the cytoplasm of the cells. Although they point out that the cultural conditions are those that apply more particularly to the bacteria, the authors remark that they venture no statement as to the place among living things to which the bodies they have observed belong. Again, while believing that an etiological relationship has been shown to exist between the cultivated micro-organisms and epidemic poliomyelitis, they admit as a possibility that two factors may be present—the one an invisible, because ultra-microscopic, organism, the other the globoid bodies which they describe.

Salvarsan Therapy.—Nonne (Syphilis of the Nervous System) discusses the indications and contra-indications for the administration of salvarsan in syphilitic nervous diseases. The danger may now be said to be slight, provided a proper technique and

proper dose are employed. The intravenous is far more often employed than the intramuscular method, the advantages of the former being (1) exactness in dosage, (2) absence of pain, (3) quicker distribution of the remedy throughout the entire system, and (4) the certainty of obtaining an effect from the entire dose. No dangers attend the intravenous administration of salvarsan if (1) the remedy is injected in either an alkaline or neutral solution, (2) if careful asepsis or antisepsis is observed, (3) if care is taken to prevent the entrance of air-bubbles into the veins, and (4) if it is not given in severe cases of arteriosclerosis, extensive nerve degenerations, advanced cases of diabetes, and in general marked cachexies such as exist in tuberculosis and carcinoma. In Nonne's experience the danger said to exist in aneurysm and myocardial degeneration has been overestimated. Salvarsan is, it has been affirmed, injurious to the nervous system, but was opposed to its use in advanced nervous degenerations on account of experiences with atoxyl. There was at first some hesitancy in employing salvarsan, which is also an arsenical preparation, on account of its possible harmful effect on the optic nerve. It has, however, been determined that salvarsan is not injurious when the optic nerve is intact, and also that nonspecific disease of the optic nerve appears to progress no faster after the administration of salvarsan than before. Disease of the auditory and facial nerves seems, however, to be more frequent than it was prior to the introduction of salvarsan. The circumstance, however, that the so-called nerve recurrences disappear as a rule under salvarsan and mercurial therapy, indicates that they are due to cerebral syphilis. Some of these so-called recurrences may probably be explained by the circumstance that these symptoms have been more carefully looked for since their occurrence in the course of salvarsan therapy was first noted. It must, however, be admitted in Nonne's opinion that salvarsan is able to render spirochæte foci mobile or active which otherwise perhaps might have remained latent. In summarising the influence of salvarsan in syphilogenetic diseases Nonne says: "The innumerable reports concerning the effect of salvarsan in the last four years permit us to say that these specific syphilitic affections are very favourably and speedily influenced, but that tabes and paresis show no material change in their clinical course." With regard to tabes Nonne holds that salvarsan may in general be given in those cases where mercury is indicated, but that it has not been proved that it is of any more value than mercury in this disease. Again, he believes that salvarsan is permissible in incipient cases of general paralysis: "There are no cases reported, however, in which the improvement has been more marked than many experienced practitioners have seen before the salvarsan era." Nonne is at present employing salvrsan injections in combination with mercurial inunctions and calomel injections, administering as much as 5 grammes of salvarsan in a period of from five to eight weeks, as advocated by Dreyfuss. Thus far, however, he has formed no conclusions as to the efficacy of this as compared with other methods of administration.—Edinburgh Medical Journal.

On the Importance of Marine Hospitals in the Treatment of Surgical Tuberculosis —J. Calve insists that surgical tuberculosis is a general and not a local disease. Thus Pizzini has shown that 42 per cent. of apparently healthy glands have been proved to be tuberculous by inoculation; at any time the bacilli may be carried into the blood-stream and settle on joints or other glands. Again, surgical tuberculosis constantly recurs in the same subject. A general treatment is therefore required. The scrofulous are behindhand as regards nutrition, and have slow metabolic processes and a diminished mineral content of the tissues. A marine climate, by its more regular temperature, its stimulating and oxydising qualities offers many advantages. Joint and gland tuberculosis require a different climate from the pulmonary forms; a bare, unprotected sea-shore and exposed to all the winds that blow is the best. The actinic solar rays are more powerful at the seaside than elsewhere; hence at Berick insolation galleries are provided. The results of marine treatment are most advantageous in glandular cases, where immediate and rapid retrogression is the rule as regards the larger part of the glandular mass, followed by slower action and complete cure in three years. Great stress is laid upon exposing tubercular wounds and fistule to the open air, whereby osseous and joint suppurations are strikingly lessened and their fœtor equally diminished. Of 22 cases of early hip-joint disease, 1 died of meningitis, 10 were absolutely cured, 6 had a pseudarthrosis with shortening from 1 to 3 cm., and 5 recovered with ankylosis. Of 28 cases complicated by fistulæ 6 died shortly after admission and 1 after disarticulation, 10 were subjected to drainage by operative measures, 8 being cured, 1 improved and 1 died; 2 others were curetted and cured. The remaining 10 were free from fever, and 8 of these were cured after a few weeks, 1 was improved and 1 is still sta-

tionary. Eight early cases of Pott's disease were treated for three years without interruption; 7 were cured without or with very slight degree of hump-back, without malformation of the thorax, and without any arresting effect on general bodily development; 1 died. Thirty cases with Pott's disease and abscesses were treated by puncture and injections; 27 were cured, 2 died, and 1 developed a fistula. Another 30 cases had fistulæ on admission; of these 20 are dead, 6 are stationary, and only 4 were cured. In France there are 2,500 beds for surgical tuberculosis, and 1,494 of these are devoted to recumbent cases. This compares very favourably with all other countries, where the number of beds and duration of treatment are inadequate. The great bar to success is ignorance of surgical tuberculosis both on the part of the profession and the general public, so that little more than 10 per cent. are admitted to hospitals in the early and curable stage. The great need at present in France is for technical schools attached to the sanatorium where the children who are deformed can learn a trade. The Treloar Cripple Home and College and the Massachusettes Hospital School are quoted with approbation.

The Diptheria Bacillus and Scarlatinal Infection.—Higgins (British Medical Jour nal) has carried out a very careful series of observations upon the presence of diphtheria bacilli in the upper respiratory tracts of patients who have recovered from scarlet fever, and who have subsequently infected others after longer or shorter intervals. In a very large number of observations it was found that typical diphtheria bacilli could be isolated from twenty-five per cent. of all recovered scarlet fever patients who subsequently became the source of scarlatinal infection of others. On the other hand, this bacillus was present in only seven per cent. of those recovered scarlet fever patients from whom no secondary scarlet infection took place. This latter is also the percentage of positive findings of diphtheria bacilli in normal healthy school children. From these observations it seems that the presence of the diphtheria bacilli in the upper respiratory passages of a recovered case of scarlet fever is associated with a prolongation of the period of scarlatinal infectiousness, and the probability of infectiousness is increased by the presence of the diphtheria organism. The occurrence of rhinitis, and sometimes of otorrhea, is common among these infectious, recovered patients, and it seems probable—though it is not certain—that the rhinitis is due to the infection by the diphtheria organism. Whether the diphtheria bacillus merely keeps up a pathological condition in the nose, in which the unknown scarlantinal germ can continue to retain its virulence, or whether the bacillus has a property, peculiar to itself, of enabling the scarlatinal virus to flourish even in the absence of rhinitis (a symbiosis) has not been determined. From the frequency with which the diphtheria bacillus is to be found in the healthy noses of those in intimate contact with scarlet fever patients, and from the fact that these persons are peculiarly liable to spread scarlet fever, it seems that there is some evidence for the belief that the diphtheria organism may bring with it the scarlet fever virus. It is also a common experience in fever hospitals, to find that the scarlet fever patients are peculiarly susceptible to diphtheria infection. It is also well known that the epidemics of these two diseases are often strikingly parallel both in location and in intensity.

The Intestine as a Pathway of Tuberculous Infection.—Findlay, in The British Medical Journal says, by feeding rabbits with tubercule bacilli enclosed in capsules, has obtained results which, he feels, warrant the following conclusions: 1. Healthy rabbits can be infected by the ingestion of large amounts of bovine tubercle bacilli. 2. The bacilli can pass through the apparently intact intestinal mucous membrane and reach the mesenteric glands within a period of six days; this, however, does not frequently happen. 3. When infection occurs the intestine is invariably the seat of lesions, and thus tuberculosis of any organ, other than the intestine, is always a secondary infection when the bacilli have entered by the intestinal route. 4. Catarrh of the intestine does not favor the passage of the tubercle bacillus through the wall, but allows of a more constant, and also of an earlier and more widespread infection of the bowel, and in this way facilitates dissemination. 5. Healthy rabbits apparently cannot be infected by the ingestion of large amounts of the human tubercle bacillus. 6. Rabbits just recovered from intestinal catarrh manifest tuberculosis after the ingestion of human tubercle bacilli. 7. With the human type of organism a local lesion, though always present, may be slight in comparison with the disease foci in the mesenteric glands. 8. It would seem that the best means of combating the spread of bovine infection in childhood—until tuberculosis of cattle is eradicated—is in the avoidance of everything likely to cause intestinal catarrh.

Bronzed Diabetes.—Core (Medical Chronicle) remarks that Bronzed Diabetes, or Haemo-chromatosis, a rare disease, was first described by Haust and Chauffaud in 1882. Up to the present time only some sixty cases have been recorded, and Core now describes two further cases which have come under his notice during 1911. In discussing the symptoms of this disease, he remarks that the diagnosis depends on the presence of three groups of symptoms—pigmentation of the skin, hepatic cirrhosis, and diabetes mellitus. Of these, hepatic cirrhosis is the most constant; cases have been recorded in which there was no pigmentation of the skin, and others in which glycosuria has been absent. In all cases, however, there has been pigmentation of the viscera found post mortem, and a certain amount of pancreatic fibrosis. The colour of the skin is not so much brown as gray; in one it resembles the pigmentation in argyrosis; in other cases it has been of a yellowish-brown. Diabetic symptoms are, as a rule, very prominent; the patient generally coming under treatment for thirst, polyuria and progressive weakness. Once these symptoms appear they dominate the scene clinically. Cirrhosis of the liver is always present in this disease, though the patients appear to suffer very little, if at all, from the usual symptoms of this disease. The post mortem examination shows a rusty-brown pigmentation of the viscera. The liver in the majority of cases is increased in size and cirrhotic. The pancreas is almost always cirrhotic, glycosuria being associated with a fibrosis affecting and destroying the islands of Langenhans. The pigment, first accurately described by V. Recklinghausen, consists of two substances, haemosiderin, and haemo-fuscin. Haemosiderin contains iron, and is found in the cells of the liver, pancreas, kidney and sweat gland. Haemofuscin is deposited in the connective tissues and smooth muscle cells. These two usbstances probably represent different stages in the metabolism of some common substance. As regards the pathogeny of the disease, different theories have been advanced. The view that the diabetes is primary, and produces the pigmentation, which was held by the French School, has been abandoned, because diabetic symptoms are not invariably present, and, even if present, may only appear during the last few months of life, long after pigmentation has been pronounced. It is now generally held that the glycosuria and hepatic cirrhosis are the results of pigment deposition in the pancreas and liver, the fibrosis in the organs being, to a certain extent, analogous to the pigmentary cirrhosis of the lungs in pneumonoconiosis. The fact that much of the pigment in question contains iron, indicates the blood as its source. But many, if not most, of the recorded cases of haemochromatosis are associated with a strikingly normal blood count, so that excessive blood destruction can hardly be assumed to have existed in these cases; moreover, the long-standing nature of the pigmentation in some cases is against the idea that there is any great degree of blood destruction. It seems more probable that the presence of haemosiderin in the cells of the liver and pancreas is due to a defect in the cells, which alters their normal manner of dealing with blood pigment. Opie considers that in this disease there is a toxin which influences certain parenchymatous cells in such a manner that the soluble blood pigment brought to them is converted into the insoluble haemosiderin. The nature of the primary toxin is as yet unknown. Adami considers it to be bacterial, and probably of intestinal origin. In this connection it is interesting to recall the existence of the condition known as enterogenous cyanosis. It is possible that the cause of this may be closely similar to that of haemo-chromatosis, and that the former is an earlier condition of the latter.

Intermittent Claudication in Right Lower Extremity.—Weber (Proc, of Roy. Soc. of Medicine) records the case of a male aged 25 years, a tailor, the subject of this disease. The patient had had no other illnesses, except gonorrhoea five years ago. There was no history of syphilis, and the Wassermann reaction was negative. He has been always moderate in use of alcohol and tobacco. His illness began with a cramp-like pain in the calf of the right leg on coming home one day from work. For the first year the pain was limited to the calf, but then pains in the foot occurred as well, and the feet used to get blanched. A year ago he could walk 300 yards without a rest, but now he can only walk about 25 yards without stopping. In his business he always used a treadle sewing machine, but after 9½ years he had to give it up in consequence of his leg pains. He was a well-developed man, whose only complaint was of his leg. When walking he has to stop every 25 yards or so on account of the cramp-like pain in the muscles of the calf and foot on the right side. The pain goes off immediately he rests, and he can then walk another 25 yards before he has again to stop. The right foot always becomes pale and cold when he walks, but when he allows it to hang down in a dependent position it always shows a red flush as compared with the left foot. No pulsation can be felt in the right dorsalis pedis artery. Pulsa-

tion in both femoral arteries at the groin is good. When the left lower extremity has been rendered anaemic by Esmarck's bandage, the hyperaemic reaction in the foot follows almost instantaneously after the removal of the bandage; but on the right side the return of blood after removal of the apparatus is slow and irregular (blotchy), the wax-like pallor lasting two minutes at some spots of the right foot before giving place to the redness of cutaneous hyperaemia. There is no evidence of vascular disease in other parts of the body. Blood pressure is 125 mm. Hg. Blood examination shows a normal count, and 80 per cent. haemoglobin. There is no alteration in the reflexes. The author is disposed to regard the condition as due to the long use of the treadle sewing machine.

Two Years' Experience With Salvarsan —Malcolm Morris and Henry MacCormac (The London Lancet) have published the results of their experience with salvarsan at the Seaman's Hospital, Greenwich, London, and have also given a synopsis of the voluminous literature to date. They had no fatalities, but have collected from the literature the histories of 21 deaths following one injection, and 18 following two or more doses. There are ugly rumors that the large number of deaths from it in Paris have caused some of the syphilographers at the Saint Louis Hospital to forbid its use, but Morris merely mentions hearing of some cases which died during the injection. The deaths are about equally divided between intravenous and intramuscular. Many developed coma, jaundice, cyanosis and convulsions. There seemed to be anaphylactic phenomena in these as well as other non-fatal cases—a supersensitiveness of tissues to arsenic. This is curious, as the spirochetae may develop a resistance to arsenic. Ehrlich has demonstrated that all trypanosomes are capable of developing such resistance. Deaths are largely in those having paresis, tabes or other forms of involvement of the nervous system or diseases of the heart and arteries.

"In all our primary cases the disease has been immediately arrested, and in none which we have been able to follow up have secondary symptoms developed, with the exception of sore throat. In secondary and tertiary cases the skin lesions, without a single exception, have rapidly disappeared.

In secondary cases there has been rapid disappearance not only of cutaneous but also of mucous membrane lesions. The rash has quickly faded, but some pigmentation has usually persisted for a considerable time. The general condition also has greatly benefited, the appetite improving, and the patients putting on weight and gaining color.

The effect of salvarsan in reducing the temperature in secondary cases is remarkable. When syphilitics are being treated as out-patients the fact that they are suffering from slight fever is apt to be overlooked. Sometimes the fever is more than slight.

In tertiary cases, even in cases that had proved obdurate to mercury and iodide of potassium vigorusly and perseveringly administered, we have not had a single failure where the integumentary system was attacked. Almost as much may be said of lesions of the tongue. Here, however, we have two disappointments to record. In one case the patient, a male between 45 and 50, who had received one injection of salvarsan, returned a week later for a second injection, when it was found that in the interval an active carcinoma had developed and that submental glands had become the seat of metastases. In the other case, that of a man of 50 with severe lesions of the tongue, there was also nephritis, so that the dose of salvarsan was limited to 0.2 grm. Even this was borne so badly that no more salvarsan was given. The patient succumbed to carcinoma six months later.

As between the two preparations, our results incline us to give the preference to the earlier one. Neosalvarsan is not only less stable than salvarsan, so that unless it be used at once its toxicity may be intensified to the danger point, but we have found it to be less rapid in its effects, lesions disappearing less readily under its influence, and the Wassermann reaction remaining positive longer.

Importance of Early Treatment —Desirable as it is to secure the rapid disappearance of the secondary or tertiary phenomena, it is of still greater moment to abort syphilis in the first stage, so that it may never develop into a constitutional disease, or to arrest it at the very beginning of the secondary stage. Now that the presence of the spirocheta can be demonstrated with comparative ease in the primary sore it is no longer necessary to wait even for induration. Neisser's experiments with apes show that the virus has found its way to the internal organs within 16 days of infection, that is even before the appearance of the primary sore, and the generalization of the disease appears to be complete, as a rule, by the time the chancre appears. The obvious inference is that whenever a suspicious sore comes under notice it should be examined for spirochetae without delay, and that whenever a possibly syphilitic rash is observed the Wassermann test should be applied. If in either case the result is posi-

tive and no contraindications are present, an intravenous injection of salvarsan should be given, while in the former case the sore should, if possible, be exercised or destroyed with cautery. A mercurial course should at the same time, in our opinion, be begun. After a few days a second dose of salvarsan should be given, and if after another short interval the Wassermann reaction has not become negative, a third. In all cases the course of mercury should continue, with intermissions, for two years. In cases treated thus, the vast majority of the spirochetae will as a rule be destroyed by the salvarsan, and the remainder disposed of by the mercury.

Is Salvarsan a Cure?—In connection with a disease in which there may be recrudescence years after the disappearance of all symptoms, and in which the Wassermann reaction may return to the positive although there are no further clinical phenomena, the term 'cure' must obviously be used with great caution. The most that we are able to say from our own experience is that in two of our cases treated with salvarsan alone the Wassermann reaction has remained negative after the lapse of a year. At the present time the only conclusive evidence of cure is reinfection, of which we have had no instance. Cases of reinfection have, however, been recorded by, amongothers, Colonel T. W. Gibbard, R. A. M. C., who last year reported five such cases in the Rochester Row series. In each instance the sore was on a fresh site and occurred within the incubation period from the date of exposure to infection, and though it is possible that the lesions were chancriform gummata, this is rendered very improbable by the large number of spirochetae present in each lesion. But although salvarsan may in some cases abort the disease in the primary stage, and may effect a permanent cure in later stages, these results cannot be confidently counted upon, and prudence dictates that in every case this remedy should be supplemented by a course of mercury. On the other hand, that salvarsan has a more rapid and powerful effect upon the spirochete than mercury seems to us indisputable. In some of our cases malignant and less severe types of syphilis that had proved absolutely resistant to mercury, or to mercury *plus* potassium iodide, have promptly yielded to salvarsan. With mercury alone, however administered, lesions are much more persistent, and in nearly all cases the Wassermann reaction remains positive during the first year and in about a third of the cases for over two years. The superior virtue of salvarsan is therefore demonstrable, and in every case in which it is not contraindicated it ought, in our opinion, to be administered as soon as the diagnosis is established."

It is quite evident now that though Ehrlich has made a great discovery, he is still far from having produced a safe remedy which will cure in one dose as was so confidently claimed at first.

The Treatment of Ankylostomiasis.—Keith (The London Lancet) has found that bismuth given with thymol or eucalyptus by delaying the passage of the anthelmintics through the intestine increases their efficacy. He also mentions the fact that the mucus in the intestines frequently protects the worms from the drugs, and that there may be reinfection from larvae which were on their way from skin to intestine when treatment had apparently cleared the canal of all worms.

"As reagrds treatment, one concluded that if the percentage of hemoglobin is in the neighborhood of 60 it may be reckoned that with suitable treatment the ova will disappear in the course of a few days. With a percentage of between 45 and 55, treatment will be more difficult. Anything below 40 per cent. will indicate that great patience will have to be exercised before recovery can take place; it will not be a question of weeks but of months, and this is certainly so when we get as low as 10-20 per cent. of hemoglobin. Several of these cases with a very low hemoglobin index have been under one's observation and treatment for months. It is true that the general condition improves with rest and diet. As a rule, the edema soon disappears and the patient feels better, but the ova, though they decrease in number rather quickly at first, and then more gradually, do not disappear entirely for months, while the hemoglobin index remains persistently about its original level.

Intensely fatty structures such as we find in this disease cannot be expected to return to a healthy condition quickly, and we must have patience while the fat is being absorbed and the tissues are returning to a healthy state. From recent results one has come to the conclusion that beta-naphthol in 30-grain doses the first thing every morning is likely to prove more effectual than eucalyptus or thymol. The necessity for starving patients while the treatment is being carried out is by no means evident; indeed, in bad cases it may even be harmful. More especially siit unnecessary if the drug is given the first thing in the morning. There will not be much food found in the upper part of the small intestine five or six hours after an droinary meal, so that if the drug be given the first thing in the morning there is no necessity for starvation. It is

true that large doses given frequently of these drugs are apt to irritate the mucosa of the stomach and intestines, but that is no reason why we should refrain from employing them in this way. Energetic treatment is needed, and I have never seen any ill-effects follow from such measures."

Hemiplegia Following Syphilis.—Mackinnon (The London Lancet) has called attention to the fact that paralyses from syphilitic arterial disease may occur a few months or even as early as six weeks after the primary lesion. Hemiplegia generally occurs in persons less than forty, when hemorrhage from atheroma may be excluded, although syphilitic arteries may rupture in these early years. The lesions are multiple and succeeded one another, so that paralyses may appear in two or more sets of muscles.

In its appearance and mode of onset syphilitic hemiplegia may be sudden, but as a rule it comes on gradually with tingling and paresis of one or more limbs. It often occurs during sleep or when the patient is resting, the flow of blood being then slower and the conditions favorable for the formation of a thrombus in the narrowed lumen of the blood-vessels. In none of the cases mentioned was there loss of consciousness, but it may be of interest here to note that apart from the occurrence of hemiplegia, severe headaches and epileptiform seizures occurring for the first time in a man who hitherto has been free from these are frequent accompaniments of cerebral syphilis and often precede the onset of hemiplegia.

If these cases are seen early and given appropriate anti-syphilitic treatment, there may be complete and rapid recovery. If the cases, however, are not seen early and properly treated, the result of interference with the blood-supply to the affected part of the brain is softening and irreparable damage to the nerve cells. Hence the importance in such cases of early diagnosis and treatment, and when a history of syphilis is not available, valuable information might be obtained by the Wassermann test and examination of the cerebro-spinal fluid. The interval of time elapsing between the primary infection and the appearance of the hemiplegia varied, but in three out of the four cases it occurred within nine months, the earliest being five months. In the other case syphilis was admitted, but the patient was uncertain as to the date of infection.

Postoperative Treatment of Anal Fistula.—Engel (Progres Medical) reports good results from the use, after operation, of sitz baths in a solution of formaldehyde of varying strengths in water. Already on the day after the operation, while the patient's bowels are being kept locked up with opium pills, two sitz baths are given, each of twenty minutes' duration, with a two per cent. solution is gradually increased to eight per cent.; this percentage is generally attained on the tenth day after operation. At first the patient experiences a slight sensation of burning, but this soon disappears. The inflammatory process is rapidly brought under control as a result of the baths, and in most instances the operative wound is healed before the patient begins to go to stool. The same is true when the baths are employed after operations for hemorrhoids. In the case of anal fistula, the patient removes in the bath the wick previously inserted along the morbid channel; a dry dressing is applied after the bath. After Whitehead's operation the use of formaldehyde solution yielded most satisfactory results. The perianal catgut sutures were absorbed less rapidl yafter the baths than where these were not employed, and as a consequence the anal mucosa never became loose nor receded in the rectum. The postoperative treatment of fistula in ano was often markedly shortened through the use of these baths.

Treatment of Epistaxis.—Carry (Journal de Medecine de Paris) says that it is recommended not to leave tampons in more than twenty-four hours, but this brings in a risk of another kind—their early removal favoring recurrence of the hemorrhage. The essential defect in the methods referred to, is that no attempt is made to arrest the bleeding directly at its point of origin. The procedure described by the speaker is intended to overcome this objection.

Five tampons of absorbent cotton about one centimetre thick are prepared and a string attached. They are then dipped into a solution of antipyrine and introduced in succession into the nasal cavity, the first rather deeply, the next two or three between the inferior turbinate and septum, and the last—the fourth or fifth—quite superficially at the orifice of the nostril, which it closes up. By this pla, sufficient pressure is always exerted by one or another of the tampons at the precise point from which the bleeding has arisen. This point is, as a matter of fact, very constantly situated —unless a tumor is responsible—on the septum, at the junction of its cartilaginous and cutaneombranous portions. Using this procedure, arrest of bleeding in from five to ten minutes is assured. The tampons are not necessarily to be removed after twenty-four hours. In fact, Carry prefers to allow them to become discharged almost sponta-

neously, which occurs when they have become sufficiently expanded and lubricated by the local secretion. At least, only slight traction upon the string should alone be required to draw them out, without fear of detaching the clot and causing fresh hemorrhage.

Boiled water alone, to moisten the cotton tampons, may be sufficient; or, some hemostatic substance other than antipyrine, e. g., epinephrin, ferropyrine, etc.—but not perchloride of iron—may be employed. Wherever the urgency of the case permits, aseptic cotton only should be used; the usual precautions to avoid infection should be taken.

The Internal Secretions and the Female Characteristics.—Bell, in The British Medical Journal, asks the question: What is it that makes a woman a woman? In answering this question he states that although the potentiality to produce femininity exists in the earliest stages of segmentation of the ovum, this potentiality is directed towards the future development and correlations of the endocrinous glands which are to control the sexual evolution of the individual. The ovaries alone are not responsible for the female characteristics. It has been shown that the suprarenal cortex is largely responsible for the secondary sexual characteristics. Although the genitalia may be normal morphologically at birth (primary development), they become functionally active only at puberty (secondary development) if the whole endocrinous system is in perfect harmony and acting efficiently. Thus, thyroid or pituitary insufficiency may cause the genital organs to remain infantile; and disease of these structures may cause retrogression in the genitalia even after they have functionated normally. Removal of the thyroid alone produces an intense degree of atrophy in the uterus. The ovaries, however, do not retrogress; on the contrary, there appears to be increased activity, especially in the follicles. While suprarenal hypernephromata in male children are practically always associated with precocity of the sexual organs and secondary characteristics in female children with suprarenal hypernephromata the sexual organs are not precociously developed, for the tendency is rather to produce in them the characteristics of the male—a deep voice, enlargement of the clitoris, hirsuties, and so on. An excessive ovarian secretion leads to an increasein sexual activity both locally and generally. The local effects may be seen in an increased and prolonged menstration. An excessive ovarian secretion affects the metabolism in the opposite way to oophorectomy, and one of the most important metabolic disturbances is the abnormally large excretion of calcium salts. A few years ago Bossi of Genoa suggested the injection of suprerenal extract as an alternative to oophorectomy. Apparently many cures have been effected by this treatment, and also by the injection of pituitary extract. Thyroid insufficiency always causes a decrease in or the complete cessation of the function of menstruation, according to the degree of insufficiency. Insufficiency of pituitary secretion is associated with amenorrhea or scanty menstruation. Various investigators claim for different portions of the pituitary body different functions, but the author believes in the unity of the whole gland. Patients with pituitary insufficiency are always obese and dull. An excess of pituitary secretion, such as occurs in acromegaly, produces masculinity, and while in the male this may give rise to excessive sexuality, in the female it causes amenorrhea and loss of desire, as is only natural if masculinity be produced.

Treatment of Acute Phlebitis—Joly (La Clinique) that the application of ice yields good results, especially in the presence of periphlebitis, in inflammation of the venous walls already thickened through chronic disease, and in varicose phlebitis. Its efficacy is the greater, the earlier it can be brought into use after the onset of the acute inflammation; it may even abort the latter. As a receptacle for the ice the author uses a piece of rubber inner tube from a bicycle tire, sealed at one extremity and closed at the other with a large cork. This is placed along the course of the inflamed vein, undue pressure being avoided by suspending it from the hoops supporting the bedclothes, and immediate contact prevented by interposition of dry flannel. The rest of the extremity should be completely covered with cotton wool. Indications as to how long the ice should be allowed to remain are furnished by the effects of its temporary removal, viz., it should be reapplied whenever a painful reaction is observed to result from its withdrawal. When the local disturbance shows signs of recession, it may be left on only in the daytime, then only for a few hours several times in the course of the day.

Miscellaneous.

Medicine and the Pulpit.

Handley points out that there are many men who, like St. Luke, have abandoned medicine for the ministry. An eminent example is Canon Arnott, now, and for the

past twenty-eight years, rector of Beckenham, who is a Fellow of the Royal College of Surgeons, a distinguished pathologist, and the author of a work on cancer. In entering the ministry of the Church he realized a youthful ambition, deflected for a time to medicine by parental wishes. He rigidly abstains from any exercise of his old craft of surgery, whether by way of advice or practice, and this appears to be the safe general rule of those who leave the profession. His busy life in a large parish with four churches has left him little time to keep up his old and still vivid pathological interests. But he admits that while medicine has no direct value in his present field of work, the old scientific training, the long hours spent in microscopic work, the power of sympathy with suffering, the realization of the inexhaustible study and experience needed for anything like dogmatism in the ways and by-ways of nature, the humility necessary before the baffling problems of life and disease and death—all this is of incalculable value in his present profession. He speaks, too, of the knowledge of men and affairs which medicine gives, and of the intimate acquaintance with the seamy side of life to be gained perhaps better in a hospital surgical outpatient practice than anywhere else in the world. Such is Canon Arnott's personal estimate of medicine as a liberal education. —The London Lancet.

The Sleeping Sickness in Uganda.

Since the disastrous results of the use of atoxyl in this affection, the question of substitute procedures, old or new, becomes of much interest. Schilling gives the results of his recent study on this subject. At Entrebbe there had been no deaths for 18 months. The inhabitants, intelligent people, have carried out all the prophylactic measures submitted to them. In other localities, however, much sleeping sickness still prevails despite the haste with which the populace is being removed from infected regions. All houses, boats, etc., in the latter are at once burned. Deforestation is practised to a certain degree, although large trees are not molested. The river banks are sown with citronella grass, yet this is proving an obstruction to agriculture and is besides of questionable value. The papyrus plant which grows in damp, marshy soil is doubtless superior. The glossinæ are not found where it grows. All "carriers" of sleeping sickness residues are sterilized when they are known by the ordinary medical treatment, but this is a resource of minor extent. A lady named Robertson has done excellent research work on the native apes and has found typanosomes in the circulating blood. Much work remains to be done in this field. What trypanosome sare parasites and what flies are hosts, is still undecided. Attempts are naturally being made in the direction of a specific serotherapy of the disease in man, but as yet without success.—Deutsche Medizinische Wochenschrift.

Meningitic Symptoms Caused by Escape of Threadworms Through a Perforated Appendix.

Whitelocke reports the case of a girl aged 5½ years who was admitted to the hospital with a diagnosis of tuberculous meningitis. The difficulty in making a rational diagnosis was increased by the existence of an almost positive tuberculous history on the one hand, and by the entire absence of any other known cause on the other. The nervous symptoms played such an important role, and the abdominal pain was so generalized at the first and subsequent examinations, that there was little to direct attention to the local focus in the lower abdomen. The only truly localizing and diagnostic symptom was the continued flexure of the right lower limb. A true organic nerve lesion was imitated through the reflex irritation produced by the active animalcules wriggling about on the exquisitely sensitive peritoneal surface. There was an immediate cessation of the urgent symptoms as soon as the cause had been removed. Especially interesting to the surgeon is the behavior of the omentum in coming to the rescue in this case, as it so often does in others, by limiting and preventing the extension of local mischief. In this particular case it appears not only to have checked the peregrinations of many of the worms, but it seems to have actually killed them. The colony of dead worms was to all appearances enwrapped by the adherent omentum, and the individuals were held in bondage as it were in the immediate neighborhood of their place of exit from the cavity of the appendix. There was an absence of infection as the result of the perforation in spite of the free escape of a foul semi-purulent discharge on to the peritoneal and wound surfaces. A drainage-tube was used only during the first twenty-four hours after the operation. The case is unique in the author's experience.—British Journal of Children's Diseases.

Rabies.

Potassium iodide has recently been used by the author as an adjuvant to the customary treatment by inoculation in hydrophobia. A 2 per cent. solution of the salt is used, each patient taking a tablespoonful or dessertspoonful of it at frequent intervals throughout the course of preventive

injections. In 3 cases of abortive rabies the symptoms promptly disappear after the use of potassium iodide, while ordinarily the opposite condition prevails, the manifestations growing worse. It is especially in cases where the infection has existed in latent condition for some time that the author recommends the use of potassium iodide. He thinks it might also be of value in the prophylaxis of rabies. The drug may so affect the central nervous tissues that their affinity for the virus of rabies is removed. Traumatism, abuse of alcohol, and emotional stress are to be avoided in cases where the presence of the virus in a latent form is suspected, as these influences tend to excite it into action.—Koch Deutsche medizinische Wochenschrift.

Respiratory Affections in Young Children.

The administration of hot baths in acute bronchitis, bronchiolitis, and bronchopneumonia in young children is strongly recommended by the author. Such baths, followed by brief affusion of cold water, reduce fever, stimulate expectoration; deepen the breathing, thus obviating atelectasis and stagnation of secretions; exert a sedative, soporific effect, improve the appetite, stimulate ilemination through the skin, and, in fact, often seem to act specifically in shortening the course of the disease. Uniform recovery has been the rule since these baths have been used. The temperature of the bath water is 41 C. (105.8 deg. F.), more hot water being added as cooling occurs, and the patient is bathed every three hours, up to five times a day. The baths are particularly appropriate for feeble children who become chilled at the periphery while the internal temperature is abnormally high. The weaker the child and the higher the fever, the more frequently the baths are given. Where the temperature is not above 39 deg. C. (102.2 deg. F.) a ten-minute bath is given three times a day. The hot bath is not contraindicated where the temperature exceeds 40 deg. C. (104 deg. F.) in infants or very young children, though for older children warm baths may be substituted. The hot bath causes an actual fall in the rectal temperature of several degrees, attaining its maximum one-half to one hour after the bath. The theory that hot baths promote congestion of the internal organs is not supported by the author's observations. At the conclusion of each bath a nurse holds the head of the child in both hands, preventing entrance of water in the nose and mouth, and elevates the child from the hot water so that the back of the neck is exposed; cold water is then dashed once over the neck, causing a reflex gasp for breath, bringing into play the auxiliary respiratory muscles. The child is next reimmersed momentarily in the hot water and cold water poured on the chest, after which the patient is dried, wrapped in warmed clothes and placed in a warmed bed. No heart depression follows, no matter how feeble the infant. The baths are continued once daily into convalescence if the patient coughs. As a prophylactic measure against nasal catarrh the author also uses the hot bath, omitting, however, the subsequent cold affusion, and covering the child warmly enough to induce perspiration. In various other affections in infants with poor peripheral circulation, even where there is no fever, the hot bath is likewise useful. Arneth.—Deutsche medizinsche Wochenschrift.

Syphilis.

The author asserts that the spirocheticidal action of salvarsan is an indirect one, intervention of the body fluids being probably essential to its activity. In the test-tube the spirochetes can fix salvarsan, but they are not killed by it; their destruction is complete only in the human organism. Wright has shown an analogous phenomenon to hold good with respect to pneumococcus.

Salvarsan should always be employed in an alkaline solution, as an acid solution destroys the proteins of the blood and is more toxic. A rabbit was given 64 injections of alkaline salvarsan solution, the total amount corresponding to 184 Gm. of salvarsan in man, without producing any microscopic changes in the tissues. In the case of the acid solution, on the other hand, the animals generally succumb after the second to the fourth injection.

The drug has no neurotropic property. Ulmann showed that after the injection of salvarsan in rabbits the brain and other portions of the central nervous system contained only very small amounts of arsenic —less than is found after the administration of inorganic arsenicals. In most cases the brain contains no arsenic at all.

Febrile reactions following salvarsan injections are sometimes due to errors in technique (relating to the water used or the glass of which receptacles are made), but in most instances they arise from the fact that salvarsan is injected precisely during the eruptive stage, when the organism is saturated with spirochetes. Liberation of toxins from the latter is responsible. Fever may be prevented by preliminary mercurial treatment, and in any case does not develop after the second and subsequent injections. It is to be borne in mind, too, that salvarsan brings about destruction

of a multitude of other micro-organisms which may be present in the system, and that the death of these can also give rise to fever.

That neurorecurrences are in reality recrudences of syphilis and indicative of inadequate salvarsan treatment is now admitted by most observers.

Three conditions absolutely contra-indicate the use of salvarsan, viz., Addison's disease, the status thymi-colymphaticus, and cancer.—Ehrlich International Medical Congress, 1913; Press medicale

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Tuberculosis.

A marked decrease in the percentage of lymphocytes in the blood is a bad sign in pulmonary tuberculosis. Each tubercle is surrounded by a wall of lymphocytes, and while in the early stages of tuberculosis there is an extra production of lymphocytes keeping pace with the defense set up against the morbific agent, such demands on these cells may later be made by extensive tuberculous lesions that the proportion in the blood sinks below normal,—even to 5 per cent. Affections such as measles and typhoid fever, which likewise make special demands on the lymphocytes, thereby render the system vulnerable to tuberculosis or tend to remove the barriers surrounding already existing, but as yet latent, tuberculous foci. Testing the urine for urochromogen also affords valuable prognostic information. This is done by diluting urine in a test-tube with 3 parts of water, pouring half of the resulting dilution into another tube, and adding to either tube 3 drops of a 1 : 1000 solution of potassium permanganate. If a canary-yellow color develops, the test is positive. The appearance of urochromogen in the urine indicates that a previously localized tuberculous process is tending to become general and seriously threatens the system as a whole. In 84 cases in which the urochromogen test was compared with the cutaneous tuberculin test by the author, the results agreed in 66 instances. The ultimate event in these cases showed that in nearly all instances the urochromogen had furnished more accurate prognostic indications than the tuberculin reaction. Whenever urochromogen exists in the urine the prognosis is unfavorable, especially if it has been present for some time. The test becomes negative again when the system regains the upper hand over the infection. —M. Weiss, Wiener klinische Wochenschrift.

THE LONG ISLAND COLLEGE HOSPITAL HENRY STREET, PACIFIC STREET, AND AMITY STREET, BROOKLYN, NEW YORK.

Venereal Diseases of Males.

A new Annex to The Long Island College Hospital has been constructed on Amity Street in the rear of the Main Hospital Buildings on Henry Street, Brooklyn, and is now open for the reception of patients.

This Annex is unique, as it is the only hospital in Greater New York where a patient with Syphilis, or Gonorrhea and its complications, can receive the benefit of hospital treatment on payment of a moderate sum. The cases of this character requiring hospital care, have hitherto been forced from lack of other accommodations, to enter the public City hospitals and become objects of the City's charity.

New Pavilion 60 Beds.

This Annex, solely for Venereal Diseases, consists of a pavilion two stories in height, separated from the main Hospital, and contains accommodation for sixty male patients. It is a fireproof, concrete building, heated by steam, lighted by electricity, and of sanitary construction. The two main wards, which are sixty feet by forty-two feet and fourteen feet in height, have large windows with ample light and air on three sides.

Isolation of Syphilitic Patients.

It is arranged so that entire separation of the two classes of patients is maintained, the upper floor being for Gonorrhoeal patients and the lower floor for Syphilitic patients, with complete equipment of dressing-rooms on each floor, and with separate dining rooms.

The toilet and bath rooms are fitted with modern plumbing, shower baths and sitz baths. Food supplies are carried from the main Hospital and distributed to the two dining rooms from a special serving room. Space is provided for lounging room for convalescent patients, where smoking will be permitted.

Accommodation for Semi-private Patients.

For patients of a class who are willing to pay a little more for greater privacy, two small wards, one on each floor, with four beds each, have been provided.

Surgeons in Charge, Prof. H. H. Morton, Drs. H. E. Fraser and J. S. Read.

The medical and surgical treatment is under the direction of Professor Henry H. Morton and Doctors Homer E. Fraser and J. Sturdivant Read, and a special interne from the House Staff of the Long Island College Hospital, whose exclusive work is the Genito-Urinary service.

Modern Treatment, Wassermann Reaction, Examination for Spirochaetae, Salvarsan.

The patients receive the most approved modern treatment. The Wassermann reaction and the finding of the spirochaetae by dark field illumination are used as routine diagnostic mesures in Syphilis. Salvarsan is given in conjunction with other standard remedies.

The nursing is under the care of competent and experienced male nurses.

Invitation to Visit and to Obtain Information.

Members of the Medical profession and others interested in the work of this department re cordilly invited to visit the Annex, and communications to any of the Staff above named, or to Dr. Richard E. Shaw, Superintendent of the Hospital, for further information regarding the work, or reception of patients, will receive prompt attention.

Brooklyn, January, 1914.

Report of the Genito-Urinary Department of the Long Island College Hospital for the Year Ending December 31st, 1913.

There were treated in this Department for the year ending December 31st, 774 cases. Of these 618 were of venereal origin. The majority of the remaining cases were lesions requiring surgical treatment.

But three deaths are recorded: one, in a case of stricture with extravasation, moribund on admission; a second, in a case of double renal tuberculosis; the third was among the cases of Prostatic Hypertrophy, and was due to diabetic coma. As the ages of these patients ranged from sixty to seventy-nine years and many were enfeebled by months of illness, the results are encouraging and prove the value of the careful preliminary and post operative treatment which these cases received. The syphilitic cases all received active medication with mercury and the intravenous administration of salvarsan and were returned to their communities free from actively contagious lesions.

The work has been classified as follows:

Cases—774.

Syphilis	324
Gonorrhoea and complications	145
Bubo	52
Chancroid	68
Stricture Urethra	29
Epididymitis—tuberculosis	3
Epididymitis—traumatic	1
Epididymitis—double, causing sterility	1
Hydrocele	11
Bladder—carcinoma of	4
Bladder—ulcer of	2
Bladder—chronic inflammation of	7
Bladder—calculus	5
Bladder—suprapubic fistula of	3
Kidney calculus	6
Kidney tuberculosis	4
Kidney septic	2
Prostatic Hypertrophy	14
Penis—carcinoma of	1
Penis—epithelioma of prepuce	1
Penis—epithelioma of prepuce	1
Perineal tumor	2
Periurethral abscess	1
Phimosis	41
Paraphimosis	5
Scrotal ulcer	1
Scrotal haematoma	1
Varicocele	14
Miscellaneous cases	26
Total	774

Operations—198.

MAJOR		98
Stricture urethra	27	
Hypertrophied Prostate	14	
Bladder calculus	5	
Bladder papilloma	1	
Bladder suprapubic fistula	3	
Epididymitis tuberculous	3	
Epididymitis double, causing sterility	1	
Epididymitis acute	1	
Kidney tuberculous	3	
Kidney septic	2	
Kidney calculus	6	
Hydrocele	13	
Perineal tumor	2	
Penis, cancer of	2	
Undescended testicle	1	
Varicocele	14	
	98	
MINOR		100
Bubo	50	
Phimosis	41	
Paraphimosis	5	
Periurethral abscess	1	
Removal venereal warts	2	
Removal cyst in scrotum	1	
	100	

H. H. MORTON, M. D.,
Prof. and Attending Surgeon.
H. E. FRASER, M. D.,
Adjunct Prof. and Assistant Surgeon.
J. STURDIVANT READ, M. D.,
Assistant Surgeon.

Phagocytic Power of Eosinophile Leucocytes.

Manceaux has recently reported at the Societe de biologie that he has observed the eosinophile leucocytes of a pleuritic exudate engulf and digest red blood cells. The phagocytic power of eosinophile leucocytes has already been demonstrated by Weinberg *in vitro*.—La Presse Medicale.

Complete Congenital Absence of Both Radii.

Robson and Odgers, report the case of a boy aged six years, who has had "club" hands since birth. Both hands are kept in the extreme varus position, but, since an operation three years ago, can be straightened with a splint. An *x*-ray photograph shows complete absence of both radii.—Proceedings of the Royal Society of Medicine.

Treatment of Exophthalmic Goiter by X-Rays.

Ironside Bruce presents an analysis of eighteen cases of exophthalmic goiter which had been treated at Charing Cross Hospital since 1905. Six of the eighteen did not appear for re-examination, and one had died, in which case only three exposures had been given when diphtheria supervened. The remaining twelve were examined three months ago, and they had been divided into three categories: (1) cured; (2) greatly improved; (3) improved. Four were cured; the exophthalmos and goiter had gone, and no symptoms remained. Five —of which one had improved, and one of these also had been operated upon, two still remaining under treatment. The exophthalmos disappeared in four cases, was slight in three, and marked in five, two being still under treatment. The skin was normal in seven cases, and there was slight telangiectasis in four, and marked telangiectasis in one. These latter were the author's earliest cases, and the number of exposures given was much greater than had been since found to suffice. All the patients expressed themselves as much better, and they stated that their weight had increased. In none of the patients was there any sign of myxedema; and that was of interest, since in a case the author recorded some years ago, in which he thought myxedema had developed, the patient got very fat at the latter end of the treatment, which lasted two years, and the hair over her forehead began to fall. Three months ago her appearance was normal, no sign of myxedema being noted. All the author's cases were treated with the *x*-ray tube at a distance of 18 to 12 inches from the skin, the surrounding part being screened off by a 4-inch thickness of felt. They had attended either two or three times a week for periods varying up to two years. The effect of the treatment was wonderfully good. But the author had always tried to have in mind the fact that cases of exophthalmic goiter had been known to recover without any treatment whatever, so that one must somewhat discount the value of the *x*-ray treatment on that account.—Proceedings of the Royal Society of Medicine.

Have You Your Copy of This Book?

Every doctor who reads this journal should possess a copy of the great Therapeutic Price-List (1913-1914) which comes from the Laboratories of The Abbott Alkaloidal Company, Chicago. This book is more than its name implies, a mere price-list; its size is 5x8; it is cloth bound in attractive library style and one department, alone, contains over 100 pages of clinical suggestions. There are some 400 pages in all. Doctor, if you haven't received your copy better send for it now. It is free for the asking.

Hair-Ball Removed From the Stomach of a Child.

Barling reports the case of a girl, aged 7 years, who was admitted to the hospital for vomiting and severe pain in the upper abdomen of two days' duration. The child was rather small for her years, anemic, but otherwise healthy and normal mentally, except that she was described by her parents as being rather sly. Since an attack of dysentery four and one half years ago she had been in the habit of chewing up pieces of string, tape, etc., and occasionally fragments of such things had been found in the motions. Her appetite was good up to ten days before the time she was taken ill, food being taken in normal quantity and without discomfort. On examination a hard lump exactly resembling the outline of the stomach could be felt descending from beneath the left costal arch, and passing transversely across the epigastrium. The outline of the tumor together with the history led to a correct diaguosis. At operation the specimen was easily removed through a longitudinal incision into the anterior wall of the stomach about 3 inches long, the dilatation of the organ allowing the mass to be turned on itself and delivered endwise through the opening in the stomach. The opening in the stomach was closed by a double layer of sutures, and the child made an uneventful recovery. The specimen consisted of a felted mass of hair and string, the former predominating; it presented an exact cast of the stomach showing the fundus, greater and lesser curvature, pyloric autrum and pyloric canal. When dried it weighed 4 ounces and measured 10 inches from the fundal to the pyloric end.—Proceedings of the Royal Society of Medicine.

The Use of Salvarsan in Puerperal Infection.

G. Bleynie reports four cases of puerperal infection in which after all the usual measures had been resorted to apparently without avail there were injected intravenously 30 centigrams of salvarsan. Two of the patients recovered. In the two fatal cases the injection of salvarsan was followed by a temporary improvement.—Journal des Sages-Femmes.

Breakfast and Brainwork.

It is pointed out that, as the evidence of some literary men proves, there is no time of day more fitted for the production of intellectual or imaginative work than the early morning hours. A little fresh-air exercise to start the day, following the habit of some athletes in training, is a thing that many a professional or business man might cultivate with advantage, but his breakfast should often be lighter than that of the average individual. There is a great deal to be said in favor of the "coffee and rolls" plan, and for men whose day is spent in work which taxes the brain and nervous system generally more than the muscles, the wise course is to relegate anything approaching a hearty meal to the period of relaxation, the evening. But that part of the continental system which involves the eating of a heavy lunch is as objectionable as the heavy breakfast plan. It can be excused only if adequate time is given after the meal for the digestion thereof, and most professional and business men cannot spare the hour's ease which should follow a hearty midday meal. In most European cities where the midday meal is a heavy one an hour or so is commonly spent in smoking and chatting afterward. This leisurely proceeding, however, is not possible with the more strenuous business habits of England and America, as the "quick lunch" institution testifies. Nor need the quick lunch be severely deprecated if the quantity of food ingested is reduced in accordance with the time taken for its consumption. If the quick luncher is also a heavy luncher then he combines the evil properties of both the continental and English methods, and will, doubtless, incur the punishment of the dyspepsia which his habits invite. But if the meals during the day be light the writer does not believe that the worker need be asked to forego either breakfast or lunch. —The London Lancet.

The Chemotherapy of Tuberculosis.

Renon reports the results of his experimental and clinical observations on this subject He investigated three classes of substances: (1) Radioactive substances as radium and thorium; (2) mineral salts; and (3) electrical collodidal metals. The bromide and the sulphate of radium had no effect upon cultures of the tubercle bacillus, nor did either of these substances prevent or arrest the development of experimental tuberculosis in the guinea-pig. Variable results followed the use of ether agents on human beings. Whatever benefit had been derived was probably the consequence of psychic influence. The same results were obtained with thorium. The next set of experiments were carried out with the salts of nickel, yttrium, zirconium, and calcium. Chloride of nickel in a concentration of 6 to 1000 prevents the growth of a culture of tubercle bacilli, but it had no effect on the disease in the guinea-pig. In the human being doses of 5 centigrams of nickel chloride diminish expectoration and reduce the temperature in some patients but have no effect on the evolution of the disease. Chloride of yttrium has no effect on cultures of the tubercle bacillus, neither does it arrest tuberculosis in the guinea-pig. Doses of 10 centigrams in the human being improve the general condition but have no effect on the pathological process. Chloride of zirconium inhibits slightly the development of the cultures, and the evolution of the disease in guinea-pigs. Doses of 2 centigrams in man improve the general condition, particularly the weight and the appetite, and diminish the expectoration, but otherwise they have no effect. The author has obtained good clinical results with the tannate and albuminate of calcium. Electrical colloidal preparations of nickel, silica, ruthenium, and carbon were found to have no curative influence in tuberculosis. Nickel and ruthenium may relieve the secondary infections. —Bulletin General de Therapeutique.

Impaired Retinal Activity.—Berry, in The London Lancet, concludes that, physiologically, when the intensity of a light stimulus, acting only on a few end organs of the retina, is diminished in any way—that is, when either the brightness of the test object or the contrast between it and its back-ground is diminished—then the visual acuteness, the power of recognizing detail, is lowered. For diminished intensity of stimulus in the case of the normal eye one may assume diminished excitability, conductivity, or receptivity in that of the diseased eye. A priori the result must be the same in both cases. That the assumption is justifiable is shown by the fact that in every case of acquired visual defect, with obvious exceptions, the light sense for small visual angles is diminished. As this is not

AFTER THE ACUTE DISEASES

such as **typhoid fever, pneumonia, pleurisy, influenza,** or those requiring **surgical operations,** the return to health often depends on the thought and attention given to restorative treatment. If, however, a reconstructive like

Gray's Glycerine Tonic Comp.

is used, the result is rarely, if ever, in doubt. Unlike many remedies commonly used to promote convalescence, "Gray's" does not act by "whipping up" weakened functions. On the contrary, it improves the appetite, gives valuable aid to the digestive and absorptive processes, and reinforces cellular nutrition in ways that insure a notable gain in vitality and strength.

Weakness and debility vanish as vitality and strength appear. This is why "Gray's" is so useful and effective **"after the acute diseases."**

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LISTERINE

Listerine is an efficient, non-toxic antiseptic of accurately determined and uniform antiseptic power, prepared in a form convenient or immediate use.

Composed of volatile and non-volatile substances, Listerine is a balsamic antiseptic, refreshing in its application, lasting in its effect.

Listerine is particularly useful in the treatment of abnormal conditions of the mucosa, and admirably suited for a wash, gargle or douche in catarrhal conditions of the nose and throat.

In proper dilution, Listerine may be freely and continuously used without prejudicial effect, either by injection or spray, in all the natural cavities of the body.

Administered internally, Listerine is promptly effective in arresting the excessive fermentation of the contents of the stomach.

In the treatment of summer complaints of infants and children, Listerine is extensively prescribed in doses of 10 drops to a teaspoonful.

In febrile conditions, nothing is comparable to Listerine as a mouth wash; two or three drachms to four ounces of water.

"The Inhibitory Action of Listerine" (128 pages) may be had upon application to the manufacturers.

LAMBERT PHARMACAL COMPANY,

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necessarily the case for larger visual angles, it follows that a summation of feebler indiqidual impressions must have the effect of causing a stronger total impression. Both the light and color senses are greatly dependent upon the size of the angle under which any object is seen. The eye is unable to detect anything like as small differences in the intensities of contiguous retinal stimuli under a small, as it does under a greater, visual angle. And this circumstance, when taken along with the physiological imperfection of the retinal images of external points, is the reason why visual acuteness is greater in what we call a good light than it is in a sufficiently bad light. Thus is explained the drop in acuteness which takes place, physiologically, in the dark—a drop which is, however, greatly modified by retinal adaptation. Thus also is explained the drop which takes place, pathologically, when the excitability or conductivity of the nervous mechanism is lowered. It is obvious that, given normal optical conditions of the eye, a diminution in visual acuteness must depend upon some change in the retina, or its direct connections. He leaves out of consideration those visual defects which come from optical errors alone. The explanation of visual defects that come from optical errors alone is simpler. The diffusion circles of the images of objective points are of quite another nature than those which are due to aberration. As a rule, the visual acuteness of an ametrope is relatively better when compared with that of an emmetrope when the light is insufficient to permit of full vision in the case of the latter. This is due to the absence, generally speaking, in the ametrope, qua his ametropia, of any light sense defect. As regards the methods of examination for foveal vision it is easier and, for clinical purposes, sufficient to test the acuteness for Snellen's types under ordinary and reduced illumination and contrast, than to determine the limits of invisibility with the photometer and Masson's disc. Similar tests are not suitable for the examination of eccentric vision, and an estimate of visual acuteness at other parts of the retina than the fovea must be made with objects which subtend a very small visual angle.

Ether in the Treatment of Infections. —Souligoux (Tribune medicale) says that since witnessing recovery without amputation in the case of a man with both legs mangled by a heavy dray, ether having been freely used to cleanse the wounds, he has been employing this agent in the treatment of all wounds and superficial infections such as lymphangitis, erysipelas, etc., with excellent results. In lymphangitis of the upper extremity, for example, the limb is first washed with soap and water, as though for operative work, the skin then dried, and the involved region covered with compresses, upon which ether is copiously poured. Impervious material is finally applied, with bandages holding it, most tightly at the two ends of the dressing, and the whole covered with thick cotton wadding, further to lessen evaporation of the ether. In hundreds of cases thus treated only favorable results were observed, and many cases of serious infection recovered.

In peritoneal infections the Dr. was led to employ ether by his experience in a case of intestinal obstruction of eight days' standing in which, at operation, perforation was found and the peritoneal cavity filled with fecal material and gas After suture of the perforation, the peritoneal cavity, including the pelvis, was freely irrigated with ether, careful sponging practiced, two drains inserted, and an artificial anus instituted. The patient promptly recovered, and since that time the author has used ether in all abdominal operations with suppuration, with obvious success. Marcille, working under the author's direction, has used ether in six cases of ruptured ectopic gestation, seventeen cases of strangulated hernia, three of abdominal wounds with intestinal perforation, three of diffuse peritonitis, and one of perforated gastric ulcer, recovery following in all these except one case of very severe abdominal traumatism, and one of peritonitis. In a case of compound fracture of the bones of the forearm, with deep soiling of the wound, healing took place by first intention after irrigation with ether and immediate suture. The volatility of the ether appears to favor its penetration into all recesses of deep wounds, thus insuring satisfactory disinfection. On the peritoneum no harmful effect could be noticed, the gut merely acquiring a pink color and undergoing contraction.

Uses of Sodium Citrate in Dyspepsias. —Plicque (Bulletin medicale) says that sodium citrate appears to exert, in the treatment of dyspepsia, several beneficial actions. In the first place, it facilitates the digestion of milk when a milk diet is being given, preventing the formation of large, compact clots where the fluid is drunk too quickly or in excessive amounts at one time. Variot showed that many cases of infantile dyspepsia, such as occur so often in bottle fed infants, yield when a tablespoonful of the following solution is added to each four ounce (120 gramme) bottle full of milk:

℞ Sodii citratis,.....gr. xxx (2 grammes).
Aquæ destillatæ,..... ℥ ii (100 grammes).
Solve.

Again, sodium citrate acts as an alkali, and as such, becomes a soothing agent in cases of pyrosis, besides diminishing gaseous fermentation and even obviating the regurgitation of food.

Finally, sodium citrate, even in small doses, is a very good laxative. In combating constipation, so frequent among dyspeptics, it lessens autointoxication from intestinal fermentative processes and obviates the mechanical disturbances resulting from the accumulation of gases. In constipation associated with hepatic congestion, Huchard frequently advised its employment, along with sodium sulphate and bicarbonate:

℞ Sodii citratis,.....
Sodii bicarbonatis, } aa ℥ v (20 grammes).
Sodii sulphatis,..

M. Sig.: One teaspoonful every morning in a hot infusion.

Even if given without the sodium sulphate, sodium citrate acts quite sufficiently as a laxative.

The Great Practical Advance in Serotherapy and Immunization by Means of Serobacterins.

Serobacterins are sensitized bacterial vaccines or suspensions of killed sensitized bacteria. In the language of the laboratory, they are produced by saturating bacteria with the specific antibodes found in the serum of an immunized animal, removing the excess of serum by centrifuging and suspending the bacteria in a saline solution. According to the trustworthy reports of bacteriologists and clinicians, they are destined in great measure to supplant other means of immunizing against and treatment of many infectious diseases.

The method of sensitizing is, in brief, the treatment of killed bacteria with specific immune serum whereby the bacteria unite with the immune bodies present in the serum, so that upon injection the combination is ready for immediate attack by the "complement" in the patient's blood.

There is thus secured a great gain of time over the older methods of bacterial therapy, and whether in prevention or treatment this immediacy is of the utmost value. In a few days, for instance, by typho-serobacterin, the practitioner may now secure for his patient immunity against typhoid as formerly in nearly a month with the old typhoid vaccine.

Other advantages are that there is no local irritation at site of injection and little or no lassitude or sickness. More important, still, is the fact that there is no negative phase. The size of the doses may also be greatly increased, even quadrupled, thus assuring rapidity of production and strength of immunity.

Of interest in this connection are the laboratory results of Theobald Smith and the work of Von Behring in combining diphtheria toxin and antitoxin for immunization against diphtheria. By making mixtures containing varying amounts of toxin and antitoxin they were able to secure any degree of immunity—from a short passive immunity due to the serum, to an active immunity of long duration, resulting from the action of the toxin.

To the foregoing advantages of the uses of serobacterins it may be added that in very late stages of the disease, when the bacterial vaccines and even serum treatment is ineffective, successful results are sometimes obtained and life is saved.

Besredka, of the Pasteur Institute, authoritatively summarizes the matter by saying:—

"Whatever the nature of the virus, whether the microbe of plague, dysentery, cholera or typhoid fever, or whether the virus of rabies or the toxin of diphtheria, whether the microbes are killed or living, sensitization confers upon them properties which convert them into vaccines of the first order, possessing an action which is sure, rapid, inoffensive and durable."

The results of the clinical use of serobac-

Respiratory Affections

especially Chronic Bronchitis, Asthma, Convalescence from Influenza and Pneumonia, etc.—are among the leading indications for

BURNHAM'S SOLUBLE IODINE

In fact, there is hardly any group of pathologic conditions that respond more satisfactorily to the tonic action of this effective remedy than the foregoing. This is due not alone to its almost specific reconstructive effect on the mucous membrane of the air passages, or to the little or no embarrassment offered to the gastro-intestinal functions, but in a large degree to the impetus it gives to physiologic processes throughout the whole body.

Directions—*To promote rapid and complete recovery from acute or chronic respiratory diseases give 5 to 15 minims of Burnham's Soluble Iodine in water three or four times daily. Children in proportion.*

Send for notes on dosage.

BURNHAM SOLUBLE IODINE CO.
Auburndale, Mass.

terins in actual practice give, of course, the final and convincing test. Of such reports one notices that of Gordon, on the successful use of strepto-serobacterin (sensitized streptococcus vaccine) in erysipelas, emphasizing the fact that when the treatment did no good it did not do the slightest harm; that prophylactically in the face of epidemics it should have a great future; that in hospitals the resistance of the patients may be raised to bacillus coli, streptococcus pyogenes, or the pneumococcus before operations on the alimentary tract or other infected area; for preventing secondary infections and possibly in cases of difficult labor. He says that in cases already infected, the evidence shows that in a proportion of instances it is possible by this method to promote materially the patient's recovery. "By administering a sensitized vaccine to these patients, we appear to bring into action available reserves in that complex and still incompletely defined entity, the patient's specific resistance."

As to the dosage, Gordon, in erysipelas, gave as the first dose 500 million; 24 hours later the second dose was 1,000 million; the third, in 24 hours, was 2,000 million.

Broughton-Alcock found that in acute and chronic gonorrheal urethritis the injections were of little value, but that good results were almost invariable in gonorrheal orchitis, epididymitis, arthritis and periarthritis, tenosynovitis, acne, furunculosis, impetigo, seborrheic eczema.

Boinet found that the good results in typhoid fever were in accordance with its use nearer the beginning of the infection, diminishing the gravity and shortening the duration of the disease.

In gonorrhea Cruveilhier found that in all cases the duration of the disease was sensibly modified; in acute gonorrheal rheumatism he reports a number of cures. In chronic gonorrheal rheumatism, and metritis favorable results are reported.

Speaking generally, serobacterins give active immunity within 24 hours after the first injection, with marked improvement in the patient's condition. They produce no opsonic or clinical negative phase—and, therefore, will do away with this cause of solicitude on the part of physicians using the ordinary bacterial vaccines in the past.

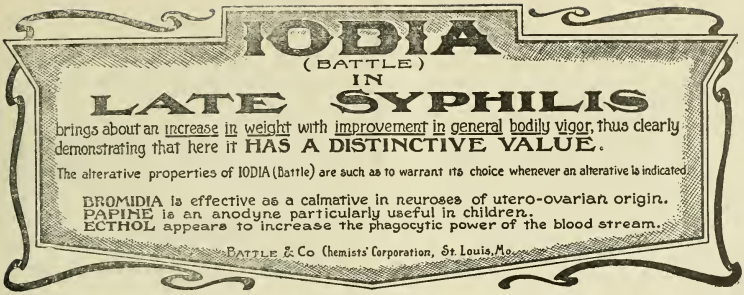
To insure that the serobacterin is properly sensitized careful complement fixation tests are carried out to ascertain the extent of antibody absorption by the bacteria. As a further safeguard guinea-pigs are injected and the action of the serobacterin is followed by means of a series of tests made with the blood serum of the treated animal.

Great care is advisable in the selection of a sensitized vaccine, or serobacterin—the product only of that manufacturer should be chosen of the highest professional character.

A complete review of the Literature on Serobacterins appears in the Mulford Digest for December, and we suggest that those who have not received a copy of this issue request one, to be read and kept on file for future reference.

Radium and Cancer.

Gould, in The British Medical Journal, points out that the selective power of radium, enables us to use it to remove the cells of a malignant growth and to leave behind the healthy tissue. The true therapeutic use of radium rests upon its selective affinity for cancer cells and not upon a general caustic or destructive power. A list of cases of cancer successfully treated by radium is given and Gould emphasizes the point that these cases show the much more rapid and satisfactory effects of radium when introduced into a tumor than when it is applied as a plate on the surface of the body. The question is whether after operating for cancer we ought to use radium as a prophylactic measure to prevent recurrence. The Doctor does not see his way to do this. In the first place, we do not know where the supposed cancer cells are lurking and, as he said before, we have at present no clear evidence that the selective effect of radium on cancer cells is exercised over a wide area. But we do know that radium can produce such active cell growth as will end in cancer. His experience warrants him in saying that in radium we have an agent that in many cases can be used in the treatment of cancer with great hope of success, and that the selective action upon cancer marks it out from all other known remedies for this disease; but this same experience also shows that it would be a gross exaggeration to speak glibly of radium as the "cure for cancer" in the sense that it will deal with any and every case of this disease. Such is not the case, but remembering what he started as a preface to this paper, that on the one hand the nature of cancer is unknown and most variable in its manifestations, and, on the other hand, that radium is almost the youngest of the known chemical elements, and has been studied but for a few years and by relatively few investigators, there is good ground for hope that in the time, which will surely come, when we shall unravel the secret of the nature of cancer and know more of the properties of radium, and how to use them better and to control them, we shall have a great extension of the therapeutic value of radium in cancer.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BROMIDIA is effective as a calmative in neuroses of utero-ovarian origin.
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Nephrectomy.

Fullerton (The British Journal of Surgery) gives an account of forty-eight successive cases of nephrectomy with four deaths, and comes to the following conclusions: (1) The mortality of nephrectomy has diminished in recent years owing to the more efficient means of early diagnosis at our disposal. (2) In most cases of unilateral disease of the kidneys, the urine of the affected side will be found to have a diminished specific gravity. This is due in the early stages to increased flow of blood through the organ caused by irritants such as calculus and tubercle. In later stages, it is due to the inability of the kidney to separate the solid constituents of the urine from the blood. In advanced cases, ropes of inspissated pus or blood may replace the fluid efflux. (3) It is not good surgery to remove a diseased kidney until satisfactory evidence has been obtained as to the functional capacity of its fellow. (4) If the urine obtained from the presumably sound side has a specific gravity of 1015 or over, is passed in sufficient quantity, and is free from albumin, pus, and blood, it is reasonably safe to remove the affected organ. (5) A trace of albumin, or a few pus or blood cells in the urine from the presumably sound side, provided the specific gravity is not too low, need not necessarily preclude operation, other conditions being favourable. (6) Removal of a bleeding kidney not obviously diseased, ought never to be carried out except as a last resort to save life. If possible, careful and repeated examinations should be made, in order to exclude the possibility of alternate bleeding. (7) A patient may have renal pain on one side and haematuria from the other kidney. It must not, therefore, be assumed that the painful side is necessarily the seat of the haemorrhage. (8) The accidents that are likely to occur in the operation of lumbar nephrectomy are: Haemorrhages, from difficulty in securing the pedicle or from injury to the vena cava; injury to the pleura or peritoneum; interference with the blood supply of the colon, leading later to faecal fistula; and laceration, or complete removal, of the suprarenal body, when extensive adhesions bind it to the kidney.

The Significance of Gynecological Diseases in Psychoses.

Koenig (Archiv f. Psychiat. u. Nervenkrankh) has made a thorough critical study of 32 cases described in Bossi's work, in which patients suffering both from gynecological conditions and psychical disorders were restored to mental health by operative measures. From this investigation as well as his own experiences, he concludes that the evidence that psychoses may be caused by genital diseases is not tenable. However, affections of the generative organs in neuropathic individuals may act as an exciting cause of a neuropsychosis. In such patients the operation may act beneficially by suggestion, while in other psychoses the course of the case is not affected by a cure of the genital condition. Any procedures which are intended to restore the menses when absent are to be avoided.

Sudden Death in Bathing.

Guttich (Med. Klinik, Berlin) describes the serious symptoms which follow irritation of the vestibular apparatus with cold water poured in to an ear with perforated drum. Not only nystagmus but vertigo, vomiting and general collapse have been observed. Even with a sound membrane, these symptoms may develop if water at a temperature of 10 C. is used for the test. These facts amply explain many cases of sudden death in bathing. The water penetrates through the perforation, or the force of the water in diving, or a wave dashing against the ear may burst a weakened tympanic membrane. Passow has related cases

of this kind. There may be a temperature irritation in the internal ear just from the coldness of the water alone, acting on the exterior of the body. The consequent irresistible vomiting or collapse under the water might easily cause death. A meal not long before renders the vomiting reflex easier to elicit. The reaction as a whole is liable to be proportional to the difference of temperature between the water and the air. Persons with perforated membrane should be warned against diving and bathing in too cold water; they should plug the ear with oiled cotton. The ears of a drowned person should be examined for perforation of the membrane.

Perforated Gastric and Duodenal Ulcers.

Seidel (Zentralbl. f. Chirurg) in order to avoid the tearing of sutures in the callous tissues about the ulcer, has adopted the following plan in his last seven cases: At two sides of the circumference of the perforation, at a distance of 1 ccm. or more from the margins, strips of tissue are removed. One, two or more supporting sutures of thick silk are applied in such a manner that they run almost parallel to the margins of the perforation and penetrate to the lumen of the stomach. These are tied loosely, so that they will not crumple or cut through the friable tissues. Around these supporting sutures the coaptating sutures are inserted from side to side, also passing as far as the lumen. They are not too forcibly tied, since they will hold firmly through the aid afforded by the supporting stitches, and hence there is no tendency for them to cut through. Another series of Lembert sutures secures an hermetical closure.

Gynecological Operations in Psychoses.

Friedel and Busse (Munch. med. Wochensch) have made gynecological examinations in 200 cases in an asylum for the insane. Busse was surprised to note the frequency of genital affections in mental defectives; in only nine were no lesions found. Uterine displacements were most common (45 per cent.), most of them following childbirth (retroflexions, decensus, prolapse). Inflammations of the external and internal genitals were also often observed as well as neoplasms (myomata, etc.) In several instances the internal genitals were entirely absent. Most striking was the frequent existence of developmental errors of the uterus and ovaries (hypoplasia, aplasia, infantilism). Operations were performed in 10 per cent. of the cases. Most of them were done for displacements, and in quite a number of cases in which laparotomy was undertaken for this purpose the ovaries were also removed in order to exert an influence on the psychosis. Myomata were removed in a few instances. Imbecile patients who often were sent to the asylum to guard them against the risk of illegitimate pregnancy were subjected to extirpation of the tubes and discharged. In dementia precox castration was performed where increase of mental disorders followed repeated childbirths and in patients suffering from periodical conditions of excitement.

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Early Diagnosis and Treatment of Ruptured Intestine.

Cope, in The London Lancet, points out the fact that while traumatic rupture of the intestine without any wound of the abdominal wall is not frequent it is sufficiently common to call for some definiteness as to the surest guides for early diagnosis and the best methods of treatment. Providing there be no lesion in the chest and that renal trauma is excluded he would submit that it would be advisable to open the abdomen on the suspicion of ruptured intestine if the following conditions be present: 1. When severe abdominal pain persists for more than about six hours after an injury, if the pain be accompanied by either (a) vomiting, especially bilious vomiting; or (b) a pulse gradually rising from the normal; or (c) persistent local rigidity tending to extend; or (d) deep local tenderness with shallow respiration; and 2. When abdominal pain is absent or only slight, but the pulse rises steadily hour by hour and the patient is very restless or listless. When marked diminution of the liver dullness occurs with any of the above symptoms, or if there be signs of free fluid in the abdomen, the indications for operation would be imperative. Since the memorable case of Croft in 1889 the recognized treatment of ruptured intestine has been by operation. After describing the technique of the operation Cope says the main points of differences between surgeons are the toilet of the peritoneum. The questions at issue are: 1. Should general or local irrigation be adopted or should dry sponging or even no cleansing of the peritoneum be attempted? 2. Should drainage be adopted? The conclusions gathered from a consideration of these methods are: That irrigation with saline solution is inadvisable in cases operated on early, and that with late cases the matter is not of much consequence; and 2, that drainage is possibly the safest plan. Notes of two cases of successful operation for traumatic subcutaneous rupture of the jejunum are given.

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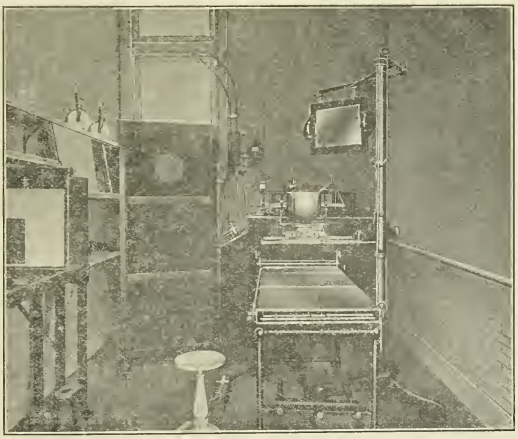
Dr. J. W. Squires bas charge of the department. While the Sanatorium has always had an X-Ray equipment we feel that this modern apparatus adds a great deal to the facilities of the institution,



Bazin's Disease.

Eve reports the case of an unmarried woman aged 31 years in whom the trouble began as a hard swelling on the outer side of the left leg, which broke down and discharged. An ulcer formed, which gradually spread. When the author first saw her in March, 1913, there were two thin oval cicatrices on the outer side of the lower third of the left leg. At the lower and outer margin of these cicatrices was a rim composed of irregular pit-like ulcerations covered with flabby granulations. The general appearances were those of a serpiginous ulcer. There was also a very small ulcer on the inner side of the same leg. The patient appeared perfectly healthy, and a Wassermann reaction was negative. The ulcerated areas were exercised and skin-grafts were applied. At the same time the affected part was exposed to the x-rays. As a result of this treatment complete healing took place. Later a few pit-like ulcers reappeared, but they healed after applications of pure carbolic acid and fomentations of 1 in 5,000 watery solution of biniodide of mercury, and the patient returned home. About three weeks subsequently the small ulcer on the inner side of the left leg broke down again, and a sore appeared on the right leg. Small areas of the margins of the scars on the outer side of the left leg also broke down. While in the hospital she has been treated by x-rays and has been kept in bed.—Proceedings of the Royal Society of Medicine.

A Few Questions of the State Board of Medical Examiners for Texas.

SURGERY.

1. What are the symptoms of air embolism? Give treatment. In what region are surgical operations most liable to be followed by this condition?

2. Give the symptoms of simple, compound, and compound comminuted fracture, and treatment of each condition of tibia and fibula.

3. Give symptoms of patient indicating tracheotomy; then intubation, and describe fully each operation.

4. Diagnose an infective exudate of the pericardial sac, beyond controversy, and state how you are going to relieve this condition.

5. Differentiate tuberculous and syphilitic synovitis.

6. Give structural changes that induce. symptoms of, and describe in detail, Bassini's operation for strangulated, oblique inguinal hernia.

7. Differentiate concussion, compression, and congestion of the brain.

8. Give differential diagnosis of pelvic peritonitis and impaction of feces.

9. Give signs and symptoms of cervical rib, and state how cervical rib produces signs and symptoms.

10. How should a dissecting wound and attendant blood poisoning be treated? What is rational treatment of suppurative abscess from its initial symptoms? Give symptoms and treatment of psoas abscess, and state with what condition it may be confused.

HYGIENE.

1. What are the preventable diseases by which the average human life could be prolonged?

2. How would you disinfect a room after occupancy by a patient with an infectious disease?

3. What methods do you adopt to prevent infection during labor, and what instructions do you give for the care of the mother and child during the lying-in period?

4. What are the parasitic diseases that may be caused by meat insufficiently cooked?

5. What are the principal pathogenic bacteria found in milk?

6. How would you test milk for impurities? for adulterants?

7. What is the difference in appearance between healthy and spoiled meat?

8. Give five reasons from a hygienic standpoint why the fly should be swatted.

9. In what ways is meat adulterated or "doctored."

10. What amount of floor-space should be allowed in a school-room for each child? Give proper height of ceilings of school-rooms, and what should be least window area in proportion to size of window.

MEDICAL JURISPRUDENCE.

1. For medicolegal purposes "mortuary law" is classified into four divisions; name them.

2. What do you understand by the term "suggillation"; give its medicolegal significance. Describe a post-mortem in a medicolegal case.

3. Give methods employed in the identification of blood stains and examination of blood; differentiate between human and animal blood.

4. Give four common causes of death from wounds; differentiate between punctured and penetrating wounds inflicted before and after death.

5. Differentiate post-mortem findings of carbonic-acid gas and sulphureted hydrogen gas.

6. Name seven forms of medicolegal pregnancy; give medicolegal importance of the uterus in the dead.

7. Give conditions or grounds warranting "justifiable abortion"; give the necessary

safeguards to be observed, so as not to be held responsible for assault and criminal abortion.

8. In the consideration of insanity and its relations to the law, give the two important questions to be determined; give distinction between intellectual and moral insanity.

9. Give four classifications or divisions of monomania and define each.

10. As applied to life insurance, what is meant by "material concealment?" Give relations of suicide to life insurance.

The Relations of Pyelitis to Pregnancy.

Mayer (Munchen. med. Wchnschr.) claims that pregnancy is not the essential cause of pyelitis but simply offers a certain predisposition to the development of the same. He believes that the ascending type of infection is rare but that the condition originates through the circulatory or lymphatic systems. It is well known that in the presence of a bacteremia, germs may find their way into the kidney although migration through the lymphatics from the intestinal tract is not generally acknowledged. Lymphatic connections between the right kidney pelvis and the colon have however been demonstrated and probably account for the greater frequency of right-sided pyelitis. The normal intestinal coat does not allow the migration of the colon bacillus, but Mayer believes that observation will demonstrate that most cases of pyelitis are preceded by acute gastro intestinal disturbances. The appendix if diseased probably also plays an important role in the etiology of pyelitis, for urologists generally acknowledge the association between appendical inflammation and vesical tenesmus, pyemia and hematuria. As regards the influence of pyelitis on pregnancy, the author found that about one-third of the cases observed in Sellheim's clinic were delivered prematurely, due either to the temperature or the absorption of toxic products. The differential diagnosis between pyelitis and other conditions likely during pregnancy is often difficult. We must consider appendicitis, various puerperal infections and acute diseases of the respiratory tract. One or more of these may be associated in a single case.

Duration of Interval Between Insemination and Parturition in Certain Mammals With Reference to Calculation of Onset of Labor in Human Pregnancy.

Hart (Edin. Med. Jour.) that the duration of pregnancy in any mammal is not known, as the date of conception, by our present means of investigation, cannot be ascertained. In calculating the date of labor we must put out of the calculation any thought of the duration of pregnancy. The initial date for the calculation of the date of labor in the human female should be the first or last day of the last menstruation. Additional data are still required to fix which is the more reliable initial date. Midterm quickening may be used for corroboration in doubtful cases, but is not as a rule reliable by itself, owing to the mistakes that may be made by the patient. Tessier correctly suggested in 1819 that the period of gestation and therefore, logically, of the date of labor varied, and that an exact date of labor could not be predicted. Dates of labor in sufficient numbers plotted out in curves give approximate frequency polygons, usually skew. The greatest number of cases of labor in Tessier's ewe cases occurred between the 149th and 153rd days. Agriculturists usually reckon utero-gestation in sheep as a five months' one. In Spencer's cattle statistics the greatest number of labors occurred between the 281st and 289th day (530 out of 764 cases). Tessier's cattle cases give an analogous curve. The date of labor in mammals is therefore a varying and not an exact one, and the greatest number falls within certain definite days. A long insemination- or menstrual-labor period does not necessarily mean a prolongation of the duration of

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pregnancy. The alleged greater size of the fetus in long insemination-labor periods is not yet accurately proven, and is not supported by Spencer's and Tessier's results.

Acute Infective Hepatitis.

Rodano states that this condition was first described as a complication of dysentery by Remlinger in 1900. The clinical picture closely simulates that of hepatic abscess, the differential diagnosis being revealed only on the operating table. The author reports a case of this condition in a girl aged twenty years. The temperature is remittent or intermittent, the liver is enormously enlarged, there is pain referred to this organ, and there is a leucocytosis with an excess of sudanophiles.—Rivista Critica di Clinica Medica.

Treatment of Defects in Speech.

In the course of this study of what the general practitioner can do to ward off and cure defects in speech, Froschels emphasizes that much can be done in preventing the development of stuttering. When a child hesitates and repeats the last syllable over and over, it is because its little brain cannot keep up with its speech; it keeps repeating the last syllable until it can think of the proper word to go on with. This is not pathologic, but it becomes so if the child's attention is drawn to this habit. The family and friends must have impressed on them with great emphasis that it is absolutely necessary to refrain from attracting the attention of the child to this slight defect in its speech. It must not be corrected, or forced to repeat the word over again, and, above all, no impatience should be manifested. If the child's attention is once attracted to this simple repeating of the last syllable the trouble becomes confirmed and we have the severe disturbance of stuttering which may brand the individual through life and make him hold aloof from his kind.—Med. Klinik.

Tuberculosis of the Larynx in Children.

Edouard (Thesis de Lyon) says that laryngeal tuberculosis is relatively rare in children. Its frequency in tuberculosis children ranges from 2 or 4 per cent. according to the clical symptoms only to 13 per cent. as ascertained by post-mortem examination. A primary form is most exceptional. The condition is chiefly found in miliary tuberculosis and in advanced pulmonary and generalized tuberculosis. Its pathology varies. In miliary tuberculosis infection occurs by the blood stream, while in some of the cases where the pharynx is simultaneously involved the lymphatics convey the infection. Inoculation by the sputum may take place in children as in adults. The earliest symptoms is usually dysphonia, and is followed by laryngeal pain, dysphagia, and an intermittent, dry, hoarse cough. Dyspnoea, however, which may be of sudden onset, is the predominant symptom, and is more marked than in the adult, partly from the narrowness of the larynx and partly from the frequency of spasmodic phenomena in children. The clinical forms are the granular (the most frequent), the infiltrating and ulcerative, the ulcero-oedematous, the pharyngo-laryngeal, the vegetative, tuberculous tumor of the larynx, the subglotic and the perichondritic. Diagnosis must be made in a few rare cases of sudden onset from diptheria and suffocative laryngitis, in the vegative forms from papilloma, and in other cases from congenital syphilis of the larynx and compression by lymphatic glands. The prognosis is very grave. The course is always rapid and rarely exceeds eighteen months. Death frequently occurs in a few months or even weeks. In Nobecourt and Tixier's case the duration was only four days. The treatment is that of pulmonary tuberculosis. Owing to the difficulty of local applications and the frequency of asphyxial attacks tracheotomy is often indicated. The thesis contains the histories of eleven cases, four of which are original, in children, five males, six femanel, aged from 1 1-2 months to 14 years.—British Journal of Children's Diseases.

Treatment of Enuresis.

Simpson (Edinburgh Medical Journal) that in the treatment of enuresis a change of scene will often prove beneficial. Special attention should be paid to the habits of the child. Thus, if the enuresis is most evident during the first few hours of sleep it should be seen that the child urinates just before going to bed and should then be awakened about two hours later and the bladder again evacuated. This is especially important where the urine is alkaline. Regular habits of urinating throughout the day should be established, and he should be encouraged to retain the urine as long as possible. Tea and coffee should never be given, and the last meal and fluid should be at least an hour before bedtime. Tilting of the bed, Simpson does not consider to be of any value, but plenty of fresh air and a fair amount of exercise are important.

Drug treatment averages three to six months, as the condition has become more or less a fixed habit before it is regarded in a serious way by the parents. Belladonna, potassium citrate and hexamethylenamine are three drugs of undoubted efficacy, but a careful examination of the urine is to be

made before either is employed. In cases where the urine is normal, or at least presents no abnormal features, and the incontinence is the result of some debilitating condition, tonics should be first administered, and then belladonna, commencing with ten minims of the tincture two or three times a day, and gradually increasing to 20 to 25 minims. In most cases 15 minims will be found the maximum dose necessary to be employed. In cases where the urine is extremely acid, the acidity may be reduced by ten grains of potassium citrate thrice daily, and when the acidity has been overcome, the belladonna may be begun. If the general health is not good, two or three minims of liquor strychinæ may be added. Where the urine is alkaline dieting is of first importance, all carbohydrates being prohibited. If it is very alkaline, acid sodium phosphate may be given, and then, when the alkalinity has been reduced, belladonna as above. Where it is established bacilli are in the urine, if this is very acid, reduce with potassium acetate and administer hexamethylenamine 5 to 10 grain doses thrice daily. In mixed infection, vaccines may be used to advantage. Ergot should be tried if belladonna fails. If the child is backward mentally thyroid extract may be tried, 5 grains daily. If the child is highly nervous and has disturbed sleep, 5 to 10 grains of potassium bromide may be added to the evening dose of belladonna.

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Recent Advances in the Surgery of the Lung and Pleura.

Davies (The British Journal of Surgery) says that many who have not followed closely modern advances in this field erroneously believe that the progress has been exclusively in the technic allowing of operations in the open chest. Although the apparatuses of Sauerbruch, Brauer, and others have greatly facilitated the surgical treatment of certain groups of intrathoracic diseases, "the total number of cases in which this technic is necessary is quite small compared with the great number of patients who have benefited by modern progress. The result of such progress has been the emergence of three main lines of treatment, which may be termed: (1) Treatment by collapse; (2) treatment by consolidation and fibrosis (solidification); (3) treatment by excision."

The treatment of pulmonary tuberculosis by nitrogen displacement, first devised by Forlanini in 1892, now rests upon a firm basis. It is especially indicated in those chronic and progressive cases that resist the usual methods of treatment, for tuberculosis complicated by extensive cavity formation or by secondary pyogenic infection, and for those cases complicated by repeated or profuse hemophysis. Two serious complications may arise in the application of the nitrogen displacement method: Nitrogen embolus, and the train of symptoms termed "pleural eclampsia" or the "pleural reflex." The former is due to the needle entering the lung and the gas escaping into a blood-vessel. The latter may be caused by the needle puncturing the pleura, by the introduction of the gas under excessive pressure, or by the rupture of delicate adhesions from the pressure, of the introduced nitrogen. The symptoms generally consist of a profound syncope, usually transient, but sometimes ending fatally. Both of the complications are avoidable by: 1. Local anesthetization by novocain, and 2. The employment of an apparatus of the Forlanini type, the water manometer indicating the position of the needle in the pleural chink.

It is well known that the usually employed method of aspiration of the chest for pleural effusion is not devoid of danger, and that it does not remove a sufficient amount of fluid in many instances. Davies has shown that, if oxygen is allowed to flow into the chest as soon as symptoms of distress from the aspiration appear, the symptoms will at once vanish. Furthermore, by combining oxygen replacement with aspira-

tion, all of the fluid can be withdrawn. This is radiographically demonstrable.

Concerning the treatment of acute abscess and gangrene of the lung (the author does not differentiate between these conditions), it is pointed out that the results of the surgery of the past ten years have shown steady diminution of mortality and steady increase in the percentage of cures. This improvement is undoubtedly dependent upon the progress of radiology in localizing pulmonary foci and upon the diminished danger of opening the thoracic cavity. Davies enters into the details of the operation for acute abscess and gangrene.

Solidification of the lung is the basis of the surgical treatment of bronchiectasis and of tuberculosis. The nitrogen displacement method has already been discussed. For permanent solidification, however, that procedure is not effectual and the following must be employed: (a) By solidification of part of the lung (rib resection or division of the phrenic nerve or ligature of the pulomnary artery); (b) by solidification of the whole lung (rib desection or rib mobilization). The various indications for these different types of operation are discussed by the author.

New Pavilion 60 Beds.

This Annex, solely for Venereal Diseases, consists of a pavilion two stories in height, separated from the main Hospital, and contains accommodation for sixty male patients. It is a fireproof, concrete building, heated by steam, lighted by electricity, and of sanitary construction. The two main wards, which are sixty feet by forty-two feet and fourteen feet in height, have large windows with ample light and air on three sides.

Congenital Chondrodystrophy—Wagner (Arch. f. Gynak.) publishes a report on a case of this kind in which a direct inheritance from mother to child could be demonstrated. The mother was under clinical observation since her tenth year and presented well-marked clinical evidences of chondrodystrophy including excessive muscular development, regular dentition in contrast to rickets, characteristic brachycephalic shape of the head, short extremities without bowing and enlargement of the hypophysis with normal or prematurely ossified centers, short thick diaphysis and a normal length of the trunk. The pelvis was that of the type described by Breus and Kolisko. The disease is generally transmitted to the father, although in this instance the mother was affected. He says that the condition is due to two causes, either we are dealing with an inhibition of the normal bone formation as the result of disturbances in the endocranial glands, especially the primitive genital glands, or a muscular interference of the growth of the long bones results from excessive muscular effort which is brought about by hypertrophied development of the musculature as the result of a hyperfunction of the genital glands.

Ovulation, Corpus Luteum and Menstruation.—Ruge (Arch. f Gynak.) reports his observations in a series of 106 cases in which the uterus and adnexa were rsmoved. He finds that ovulation and the formation of the corpus luteum stand in a well-marked close association with the cyclic changes in the uterine mucosa. The rupture of a follicle and the beginning of the development of the corpus luteum take place during the first fourteen days counting from the beginning of menstruation. The stage of vascularization is combined with the premenstrual changes in the uterine mucosa. The full development of the corpus luteum extends to the beginning of menstruation. The retrogressive changes in the same usually start with the beginning of menstruation and are closely connected with the interval stage to the mucous membrane of the uterus. Full development of the corpus luteum and freshly ruptured follicles were not observed in any case and one apparently excludes the other.

The Experimental Production of Pernicious Anaemia in Rabbits.—Adler (Journal of Medical Research) as the result of the researches of Faust and Tallquist into the hæmolytic substance in the head of Bothriocephalus latus, which they found to be oleic acid, has carried out some feeding experiments on rabbits. He found that fat in the form of olive oil or cotton-seed oil was toxic to these animals, this effect depending on the content of unsaturated fatty acid. Blood crises were produced resembling those of pernicious anæmia, together with extreme emaciation. The anæmia was apparently due to a destruction of red cells in the blood vessels of the abdominal organs rather than to a direct effect upon the bone-marrow. In fact, this destruction seemed to stimulate the bone-marrow, so that high blood counts were met with. Long continued feeding with non-toxic doses of quinine protected rabbits against the fat intoxication.

Table of Contents for February, 1914.

Original Communications

The Clinical Diagnosis of Nerve Syphilis, by J. Allison Hodges, M.D., Richmond, Virginia,..... 73
The Great American Fraud, Patent Medicines, Quacks, and Guarantee Doctors, by I. W. Surratt, M.D., Sylvatus, Va.,..... 74
The Autobiography of a House Fly, by C. B. Bowyer, M.D., Stonega, Va., 76
Personal and General Hygiene, by Chilton Thorington, M.D., Montgomery, Ala.,..... 79
Hypertrophied Faucial, Pharyngeal and Lingual Tonsils, Their Significance and Treatment, by C. R. Dufour, M.D., Washington, D. C.,..... 80
Simplified Surgical Technic, by Dr. J. A. Faison, Bennettsville, S. C.,..... 85
Bacterial Vaccine Therapy, by Dr. Bess Puett, Dallas, N. C.,..... 87
The Faucial Tonsils, by Dr. John Hill Tucker, Charlotte, N. C.,..... 89
Tuberculosis of the Knee, by Dr. Robt. Mann, Memphis, Tennessee,..... 91
Hemorrhage of the Newborn; A Case, by Hubert Haywood, Jr., M.D., Raleigh, N. C.,..... 92
Artificial Feeding of Infants, by L. T. Royster, M.D., Norfolk, Virginia,..... 93

Editorial.

The Medical Profession and Eugenics,..... 97
"The Mother,"..... 97
Educating the Public via the Drama,..... 98
Calomel as a Baby Medicine, 99
Transactions Tri-State Medical Association of the Carolinas and Virginia,.. 99

Book Notices.

Anatomy and Physiology, by John Forsyth Little, M.D.,..... 104
Clinical Diagnosis and Urinalysis, by James R. Arneill, A.B., M.D., ... 104
Transactions of the Thirty-Fifth Annual Meeting of the American Laryngological Association,..... 105
Practical Medicine Series, 105
Transactions of the Nineteenth Annual Meeting of the American Laryngological, Rhinological and Otological Society,..... 105
Studies in Cancer and Allied Subjects, by William H. Woglom, M.D.,..... 105
Diseases and Deformities of the Foot, by John Joseph Nutt. M.D.,..... 105
The Door that has no Key, by Cosmot Hamilton,.... 105
Medical and Surgical Reports of the Boston City Hospital, ... 105
Anatomy and Dissector in Abstract, by Stewart L. McCurdy, A.M., M.D.,... 106
The Intervertebral Foramen, by Harold Swanberg, 106
General John Regan, by G. A. Birmingham,..... 106
Transactions of the American Gastro-Enterological Association,..... 104

Abstracts.

Treatment of Intestinal Toxemia,..... 107
The Wassermann Reaction and Mental Disease,..... 108
Progressive Epileptic Myoclonus,..... 108
The Micro-Organism Causing Epidemic Poliomyelitis,..... 109
Salvarsan Therapy,..... 109
On the Importance of Marine Hospitals in the Treatment of Surgical Tuberculosis,..... 110
The Diphtheria Bacillus and Scarlatinal Infection,.... 111
The Intestine as a Pathway of Tuberculous Infection, 111
Bronzed Diabetes,..... 112
Intermittent Claudication in Right Lower Extremity, 112
Two Years' Experience with Salvarsan..... 113
The Treatment of Ankylostomiasis,..... 114
Hemiplegia Following Syphilis,..... 115
Postoperative Treatment of Anal Fistula,..... 115
Treatment of Epistaxis,.... 115
The Internal Secretions and the Female Characteristics,..... 116
Treatment of Acute Phlebitis, ... 116

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For sore, strained muscles there is nothing that will afford more prompt relief than the following:—Wet a piece of flannel with Pond's Extract, apply this to the affected area, then pass a hot flat iron gently over the whole for several minutes until perfectly dry. Pain and soreness rapidly disappear.

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Sample and formula mailed to physicians upon request.

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A Few Examination Questions of the Ohio State Medical Board.

PATHOLOGY.

1. By what agencies does the body protect itself against the entrance and harmful effects of pathogenic bacteria?

2. Describe morbid anatomy of bronchopenumonia.

3. What changes take place in extravasated blood? Name them.

4. What changes take place in an inflamed part, causing redness and swelling?

5. Describe the process of primary healing—of secondary healing.

DIAGNOSIS.

1. State the difference between organic and functional murmurs.

2. Describe method of examining the size of the spleen.

3. What is the diagnostic significance of edema of one arm and hand?

4. Describe rales, mention varieties and state diagnostic significance.

5. What are friction sounds and what do they signify?

6. What pathological significance has an increased vocal fremitus?

7. What is dyspnea and what does it signify?

8. Describe diagnostic indications from the character of cough.

9. Describe aphasia; name varieties in reference to localized lesions.

10. In what pathological conditions is ocular paralysis present?

PRACTICE.

1. Name the different forms of non-malignant stricture of the rectum. How far above the anus is a simple stricture usually found?

2. Describe your procedure in making a physical examination of the abdomen.

3. Describe the urinary findings in diabetes mellitus and chronic interstitial nephritis.

4. Make a differential diagnosis of pleuritic and pericardial effusion.

5. Define and give etiology of neuritis.

6. Give pathology of typhoid fever. Name some of its complications.

7. Give symptoms and management of paranoia.

8. Differentiate between renal and hepatic colic.

9. Give the differential diagnosis of variola.

10. Give the differential diagnosis between paralysis agitans and tabes dorsalis.

OBSTETRICS.

1. State your views with reference to examinations and what you would expect to learn by them.

2. Name some of the causes and give treatment of hemorrhage after labor.

3. How would you distinguish one shoulder from the other, when the hand and arm cannot be reached?

4. Outline general scheme of treatment for persistent and pernicious vomiting of pregnancy.

5. Give diagnosis and management of the third position of the vertex.

SURGERY.

1. Discuss acute osteomyelitis.

2. Describe complete inguinal hernia—give symptoms of strangulation and treatment.

3. Name varieties of goiter and mention the indications for surgical interference.

4. What lesions would you consider in a severe injury about the ankle joint?

5. In an oblique fracture of the lower third of the femur, state the usual position and give the muscular control of the fragments.

DERMATOLOGY, SYPHILOLOGY, AND DISEASES OF THE EYE, EAR, NOSE, AND THROAT.

1. Describe infantile eczema—outline its treatment.

2. Differentiate scabies from prurigo.

3. How do you recognize and treat scabies?

4. Describe the initial lesion of syphilis.

5. Briefly outline treatment of syphilis.

6. What faulty anatomical conditions of the eye constitute myopia, and how can it be corrected by lenses?

7. Describe simple chronic rhinitis.

8. Describe otitis media purulenta and mention possible complications.

9. Describe iritis; give causes and treatment.

10. Describe laryngeal tuberculosis.

Suture of Wound of the Heart.

At a recent meeting of the Surgical Society of Paris Lenormant reported the case of a man who had received a gunshot wound on the right side of the chest to the outer side of the mammary line. On account of the smallness and rapidity of the pulse a diagnosis was made of a penetrating wound of the heart. The author resected the first costal cartilage, then the fourth and fifth costal cartilages on the right side, and the right of the sternum. The wound in the pericardium was discovered, the latter was opened and emptied of clots, and a wound in the right ventricle of the heart was sutured. No search was made for the bullet nor for the spot of its egress from the heart. There was a perforation of the lung, which did not bleed, and which was let alone. The operative wound was closed without drainage. The patient made a perfect recovery.—Gazette des Hopitaux.

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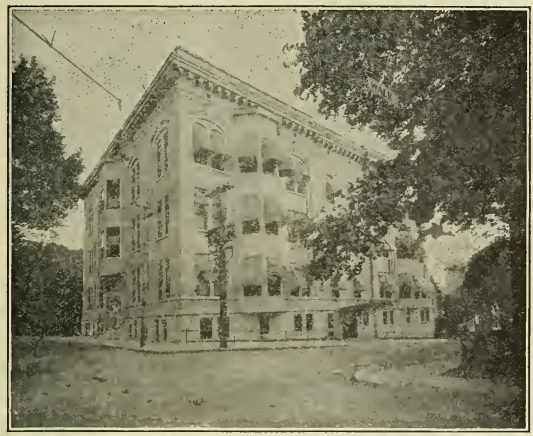

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A vacation period of two weeks each year will be allowed each pupil nurse.

Nurses will receive a salary of $7.00 per month. The time that a nurse is on duty, day or night, will be determined by the Superintendent of Nurses. Nurses and probationers will be charged tuition or laundry. Pupil nurses, while on duty, must wear the hospital uniform.

Nurses will be sent out from the hospital to do private work when directed by the Superintendent of Nurses. This service will not exceed thirty-six weeks during the three years' course.

A Patients' Room.

During the senior year, nurses will probably be given terms of service as head nurses on different halls. Their capability to do this will be determined by the Superintendent.

In sickness, all pupils will be cared for gratuitously. The time lost through his or any other cause must, however, be made up.

A Patient' Room.

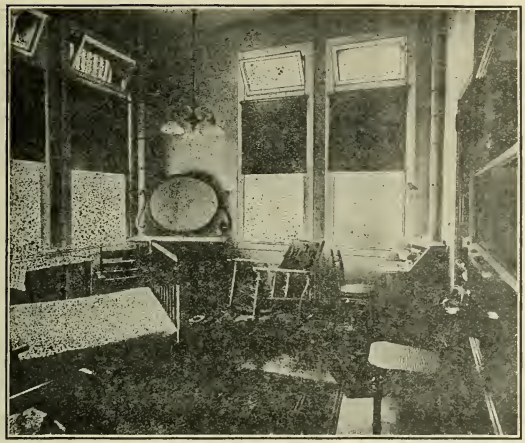
At the completion of the required course, if the nurse shows adaptability, she can take a special course in the operating-room, by giving an additional six months in this department; or she can take a special course in the Hydrotherapy Department, by giving an additional three months in that department. Nurses who take either of these special courses will receive diplomas if their work and knowledge in these departments merit it.

Each nurse is expected to respond faithfully in emergencies, and to be willing to perform any duty assigned to her.

Nurses laundry during the course must not exceed twenty-four pieces per week. This includes two uniforms, seven aprons, four kerchiefs, one white plain shirtwaist, and one whirt skirt.

Suggestions to Patients:

Patients are advised to have some understanding with their physician, surgeon, or anesthetist as to what his charges will be.



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Dr. Edward C. Register
President Charlotte, N.C.
or
Dr. W. O. Nisbet Chairman of Executive Committee Charlotte, N. C.

For further information concerning the training school, address Superintendent of Nurses Charlotte Sanatorium Charlotte, N. C.

Doctors' Reading and Lounging Room:

A large room on the third floor is fitted up for the special use of visiting doctors. Here they will find a very comfortable place to rest and discuss the various cases. Plenty of interesting literature is available, if it is desired to pass away any waiting hours. Doctors having patients in the Sanatorium. or just visiting, will be expected to make themselves at home. Visiting doctors from out town, especially, will find the building most centrally located, and it is hoped that they will make it their headquarters as long as they are in our city. Any member of the profession will be welcome to visit the Sanatorium at any time.

Rates for Rooms:

There are several large rooms, with three or more beds, at $2.00 per day, which will include board room, and general nursing, and such medicines as are kept in the Sanatorium. Prescriptions and special medicines will be extra. These rooms are very large and comfortable, being well lighted, with plenty of space on all sides. Those patients who enjoy company will find these beds all that could be desired.

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At $2.50 per day, there can be had private rooms, which are very comfortable in every way. These are well located and very accessible, and make very pleasant places to stay.

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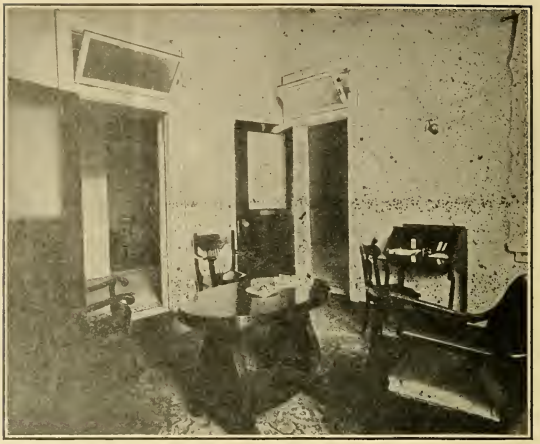
These rooms are the most select in the building, have private baths attached, and are elegantly finished. They will be found to be as comfortable as the most axacting patient could wish, being handsomely furnished, with tiled baths, having an outside exposure, with plenty of light and sunshine. They must be be seen and used to be appreciated.



A Reception-Room.

The prices for all the various rooms include board, general nursing, and ordinary medicines, Prescriptions, special medicines. special nursing, laboratory examinations. hydrotherapy, and doctors' bills will be extra.

Special Nurses: Patients desiring a special nurse can get one at any time. Nothing is more helpful and comforting to a sick person than a special nurse, and if a patient wants one it will be very easy to have one here. The minimum charge for a Sanatorium special nurse is $2.00 per day. Graduate nurses not in the employ of the hospital can be secured at $25.00 per week, or $3.50 per day. Of course, it will be only exceptional cases that will need two.

Ladies' Sun Parlor.

The Sanatorium will send out nurses on private duty at any time. Rates, $2.25 per day and expenses for pupil nurses $3.50 per day and expenses for graduate nurses. Phone or telegraph when you need a nurse, and one will be sent promptly on first train.

Use of The Operating Room: Surgical cases, requiring operations, will pay $5.00 for the use of either of the operating-rooms, and this includes dressings and solutions.

Courtesies to the Medical Profession: While the Charlotte Sanatorium is an institution owned and managed by its stockholders, its policy is liberal and at all times courteous to physicians and surgeons in Charlotte and the surrounding country. Special attention will be given to patients treated by the physicians and surgeons who are not officially connected with the institution.

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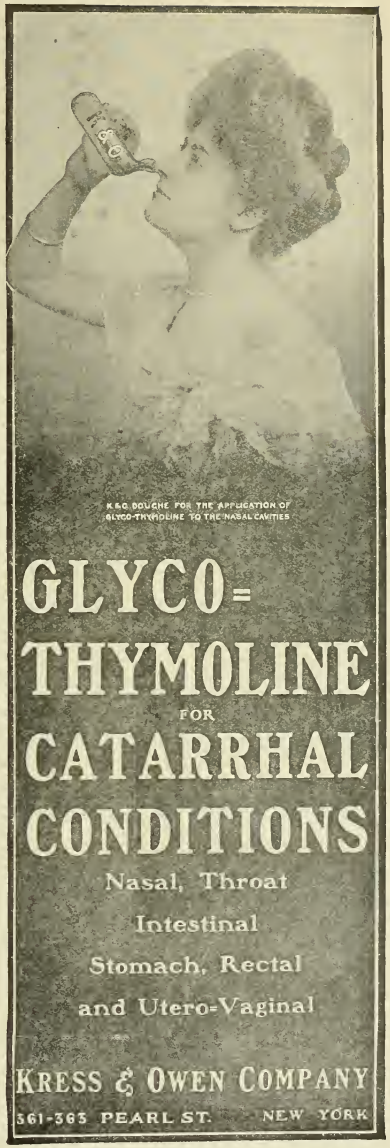
Intestinal Motility.

This question was studied by the author in rabbits, the intestines being removed from the body, kept under physiological conditions of temperature, isotonicity, oxygenation, etc., and the drugs under consideration added to the Locke solution which was being perfused through the mesenteric vessels. Dilute hydrochloric acid, sodium bicarbonate, barium chloride, sodium sulphate, aloes, senna, calcium chloride, cascara, rhubarb, castor oil, and phenolphthalein were each found to enhance the contractions of the small intestine, acting with about the same intensity whether placed in the lumen of the gut or added to the perfusion fluid. On the other hand, magnesium sulphate, opium and its derivatives, belladonna, and chloroform water were found to paralyze the intestinal movements. Substances that excite peristalsis act in various different ways. Their action is not limited to the intestine alone, some of them, such as sodium sulphate and senna, causing the formation of peristaltogenous substances which, discharged into the blood stream after the manner of hormones, become diffused throughout the system and excite intestinal contractions. The blood serum and extracts of organs of animals purged before death with sodium sulphate or senna cause a distinct increase in peristalsis when perfused through the isolated intestine. Motion pictures and the introduction into the intestine of starch paste colored with carmine were among the methods employed by the author for studying in detail the peristaltic movements and the progression of the intestinal contents under the influence of the various drugs.—Glenard, in The These de Paris.



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Gastric Hyperacidity.

Bile has been shown by the author, both clinically and experimentally, to diminish the acidity of the gastric juice and inhibit peptic activity. In view of the irritating effect and possible corrosive action of the gastric juice in gastric ulcer, he was led to try bile therapy in this affection, with gratifying results. Sodium cholate, 0.2 Gm. (3 grains), made into an emulsion in an equal amount of oil and inclosed in a gelatin capsule, was the usual mode of administration; 0.1 Gm. (1½ grains) of cholic acid was also sometimes used. In 33 cases thus treated, including some of other affections besides gastric ulcer, considerable benefit was often noted. In some of the patients a complete cure of hyperacidity and the gastric disturbances dependent upon it appears to have been obtained.—Glassner, in The Wiener klinische Wochenschrift.

"Corpus Luteum is one of the organotherapeutic agents that can be supplied in limited quantities only. The amount of raw material from which it is made is comparatively small, but the physician wants a pure article. Armour and Company state that in their laboratory the portion of the gland bearing the yellow bodies is carefully cut away and trimmed. This insures as pure a preparation as is possible until the active principle is found and isolated.

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Anedemin, a chemical compound, containing apocynum, strophanthus, squill and sambucus, which is being extensively advertised the medical profession is a preparation of no little merit. It gives results in dropsical condition due to cardiac, renal and hepatic diseases, prolonging many lives and bringing about condition satisfactory in many of the less apparently hopelessly incurables, victims of mitral regurgitation, Bright's disease and cirrhosis. Liberal working samples with literature will be furnished by manufacturers to physicians on application. Their advertisement will be found in this issue.

The Phylacogen Treatment of Infections.

An interesting experience with phylacogens has been narrated by Dr. E. H. Troy, of Oklahoma. It appeared in a recent number of the International Journal of Surgery.

"I have treated twenty-four cases of rheumatism," writes Dr. Troy. "Their recoveries were as rapid as remarkable. One man of thirty-two had had rheumatism for three years; he was confined to bed for three months, and eight months elapsed before he was able to work. He was brought to the hospital on a bed and had to be lifted on a sheet. I gave him one dose of phylacogen daily, and in six days he walked to the station, carrying his suit-case. Another patient, a man twenty-four years old, had inflammatory rheumatism when ten years of age. He was confined to bed for six months. He has suffered all his life, and had visited the various watering-places in America, receiving very little benefit. The last four years he had been almost incapacitated. I gave him ten doses of phylacogen, and his recovery was rapid."

Dr. Troy refers to a number of other cases of infection, including chronic otitis media, sycosis, acne, carbuncle and erysipelas, in the treatment of which he has been singularly successful, and adds:

"The administration of phylacogen is peculiarly adapted for the treatment of infectious diseases. . . . The only requirement is to make a diagnosis. If you are treating infectious diseases without making a diagnosis, however, do not be disappointed if you do not get results with the phylacogens."

Pipe Clay as a Gastric Remedy.—Meunier (Gazette medicale de Paris) says that kaolin (pipe clay, official as kaolinum) bears comparison well with bismuth subnitrate as a reliever of gastric pain. Mixed with water, the clay forms a paste which adheres to the stomach wall even more strongly than the bismuth salt. If kaolin is given to a normal individual, and a few days later bismuth, washing out the stomach twenty-four hours after their ingestion will show that the bismuth is entirely gone while traces of kaolin are still present. Examination of the stomach contents demonstrates that gastric acidity is much lower after kaolin than after bismuth. The stools are not blackened by kaolin as they are by bismuth; intestinal hemorrhage is therefore not masked by it.

Treatment of Pneumonia by a Polyvalent Stock Pneumococcic Vaccine.—Charteris (Glasgow Medical Journal) says:

1. The administration of a stock pneumococcic vaccine had no marked effect upon the subsequent course of the disease.

2. The mortality in the vaccine series (21 per cent.) was higher than in the control series (20 per cent.).

3. The early administration of vaccine did not abort the diseasei nor prevent complications

4. Complications were relatively frequent in the vaccine series, viz.: one instance of meningitis, two of empyema, and one of hyperpyrexia.

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is especially valuable when there is torpidity of the bowels or intestinal sluggishness arising from organic derangement of the liver and kidneys. It is the best agent for the relief of that form of costiveness that is ushered in by an attack of colic and indigestion, and not only clears away the effete and irritating matter in the alimentary tract but eliminates the semi-inspissated bile that too frequently induces the so-called "bilious" condition; at the same time an abundant secretion of normal bile is assured, thereby demonstrating its value as a liver stimulant and true cholagogue.

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Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

Pineal Gland Extract In Obstetrical Country Practice.

Wolf tested this preparation in fifty-four cases. Strange to relate he does not state whose extract he employed. In fifteen cases he did not reach his patients until the third stage of labor, when he witnessed an excellent effect in retained placenta and hemorrhage. However, lest the results be temporary only, he followed with an ergot preparation. Aside from this series his results were also excellent in the remaining thirty-nine, not inferior to those obtained by hypophysis extracts, although he admits that in eleven of these cases he was eventually compelled to use forceps.—Deutsche medizinische Wochenschrift.

Bronchial Disorders.

When an attack of bronchitis or catarrhal influenza shows a tendency to linger unduly, and seriously impair the vitality of the whole body, vigorous alternative treatment is often urgently needed to give the respiratory structures the power of recuperation. For this purpose no remedy will be found so thoroughly serviceable and satisfactory as Burnham's Soluble Iodine.

Not only does this efficient altero-reconstructive exert a pronounced influence on the tissues of the respiratory organs, the mucous membrane particularly, by promoting absorption and markedly increasing local cellular processes, but what is often equally as important in bringing about recovery, it also stimulates the functional activity of the special organs and thus increases vitality throughout the whole body, with all that this essentially means in raising local resistance and establishing normal conditions.

As further advantages to its specific therapeutic properties, Burnham's Soluble Iodin, unlike the iodides, does not irritate the stomach, derange the digestion, nor cause the slightest impairment to the nutrition.

Physician—Assistant to Licensee.

Aside from the Oklahoma case of Gobin versus State, 44 L. R. A. (N. S.) 1089, no reported instance has been found where an unlicensed physician has attempted to evade a statute prohibiting unlicensed physicians from practicing, by allying himself with a licensed physician as an employe.

That case holds, a person who does not possess a valid, unrevoked certificate from the State Board of Medical Examiners is not entitled to practice medicine under the laws of Oklahoma, except in emergencies and such other cases as are specifically exempted by the statute. And this is true even though he worked with or under the directions of a duly authorized practitioner; and it is immaterial whether he works for a fee, percentage, or on a salary.

Chronic Glandular Enlargement.

For many years Iodia (Battle) has been a favorite agent in chronic glandular enlargement, owing to the distinct alterative influence it is capable of exerting. In such conditions there is a clear indication for iodine, and this is furnished the tissues through the administration of Iodia (Battle) The therapeutic value of this drug is augmented by the active principles of such well known vegetable alteratives as stillingia, helonias, saxifrage and menispermum.

Colon Bacillus Infection of Urinary Tract in Children.

The differential diagnosis of acute colipyelitis depends on: (1) presence of pus and colon bacilli in the urine along with severe general symptoms; (2) absence of any signs of organic disease outside the urinary tract which could account for the condition.

At the onset the temperature rises rapidly often reaching 103°-105° F., or even higher and frequently assuming a remittent type. This may go on for many weeks. The frequency of well marked rigors in young children with pyelitis is interesting. Vomiting occurs in more than half of the cases. The extreme misery, restlessness, and general tenderness of these children when their temperature rises form valuable diagnostic signs. They are drowsy and often delirious and, if very young, frequently squint. The respiration rate, compared with that of the

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Tri-State Medical Association; President's Address; Medical Education.

By Southgate Leigh, M.D., F.A.C.S., Surgeon Sarah Leigh Hospital, Norfotk, Va., President Tri-State Medical Association of the Carolinas and Virginia.

PRELIMINARY REMARKS.

Before commencing the short address which I have prepared for this occasion, I would like to say a few words about our Association—The Tri-State Medical Society of the Carolinas and Virginia. Looking back over the 15 years of its existence we can now see clearly that its founders acted wisely and with keen foresight. Its usefulness has been proven beyond a doubt. It occupies a unique position in the medical world. From the first meeting its success was assured It has gradually drawn into its fold many of the most thoughtful and progressive men of the three States, all known opposition has been withdrawn, and it now enjoys the cordial support of other leading organizations.

The State Societies of Virginia, North and South Carolina, are doing aggressive, systematic, uplifting, productive work in banding together, through the component county societies, practically all of the reputable physicians in each of the States. The work of these societies, under the American Medical Association's plan of organization, is far-reaching and comprehensive, including not only scientific advancement, but all the systematic details which go to make up the comprehensive plan of uplift which is doing so much good throughout the entire country.

The Tri State acts in complete harmony with the State Societies, allowing no one to join who is not already a member of one of the three State organizations. It encroaches *not one particle* on the province or work of these societies. It simply acts as a connecting link, bringing together in close personal and professional contact many of their best men. This alone is sufficient reason for its existence. In no other way are these men brought closely together. It has nothing to do with medical organization, except to give to it, its stamp of approval. Its meetings are devoted entirely to scientific work and social intercourse. Until recently its membership has come to it without invitation. The present management thought it proper to let it be known that its doors were open and sent invitations to the members of the State Societies of the three States, to join. The responses have been numerous and many more will join later.

Personally, I feel that the Tri-State is one of the strongest and most useful societies on this continent, and I predict for it a future crowned with increasing success. I acknowledge my deepest gratitude for the proud honor of being permitted to preside at the head of this splendid organization, an honor as high as may come to any man in our profession.

MEDICAL EDUCATION.

I have chosen for my brief address, a subject which at the present time is undoubedly the most important matter now under consideration by the Medical Profession, in this country.

The United States of America being made a free country, brought manifold blessings to its people who have gathered here from the various parts of the earth, under the Stars and Stripes. But with its many and great advantages there were bound to come some disadvantages and drawbacks. Probably the most serious of these was the looseness of the laws, and lack of restrictions governing the practice of medicine, and the training and qualifications required of the members of our profession. As a natural result many poorly equipped and badly conducted Medical Colleges were founded, and vieing with each other in advertising the ease with which a so called medical education could be obtained, and offering all sorts of inducements to prospective students, attracted large numbers of young men to their halls; and as a result a great many improperly trained medical men were turned out on the country. This state of affairs existed only too long, and indeed even at this enlightened day there is still some of it remaining. The evil was long apparent to many thoughtful members of our profession, but the remedy was not in sight. It took courageous men to start the movement for raising the standard of Medical Education in this country, and to them our profession and the public owe a debt that never can be paid.

The Officers and Committees of the American Medical Association in conjunction with the Carnegie Foundation have done wonderful work, achieving already results almost unbelievable, and in a comparatively short space of time.

Colleges nearly in every state in the

union are amalgamating, eliminating, and raising their standards. Many noble sacrifices are being made by men who are putting aside self interest for the public's good and the good of the profession.

The old state of Virginia, the Mother of states, is in the front ranks of the procession, having already combined two of her three medical schools and, if *unselfishness and broad spirit* continue to prevail, by another year we will have but one medical college in the state, the medical department of the University of Virginia located in the capital city of Richmond.

Starting with 166 Medical Colleges in the United States many have already been eliminated by consolidation and otherwise, and the prospects are so bright aud encouraging that in a year or more, we shall probably have only 70 or 80 remaining.

In 1904 there were 5747 who graduated from the medical schools of this country. Since that time the number has gradually decreased until in the spring of 1013 it had been brought down to 3981, a failing off of 1766 graduates.

The time was when a man could, even at a good college, by presistent hard work obtain his medical diploma in one session. Now the course at practicially all of the colleges has been increased to four years, and there is a strong movement on foot to make it six.

The first year being preliminary, four years strictly medical and one year hospital work. Applicants are being required to have the proper academical education before entering, and the standard of examinations is being made more and more rigid.

This is marvelous work when we consider that the splendid men who have been doing it have had to back them practically no statutes. It is true the various medical examining boards have co-operated thoroughly, but the principal agency that has brought about these marvelous changes has been *public opinion*, the force of which, if guided in the right direction, is always irresistible.

This good work is steadily progressing, and should and will obtain the backing of State and National legislation.

There is still much room for improvement in the methods of teaching at our colleges. We need a new set of text books for the students. Pruning and elimination should apply here also. Much useless stuff is crammed into the head of the student, which can only hold a certain amount of knowledge at best. Why not eliminate many of the technicalities and useless things, and drill the studeñts more thoroughly in the principles and ground works of medicine and surgery?

Was there ever a better teacher of anatomy than the lamented Prof. Towles of the University of Virginia? Have auy students on earth absorbed a knowledge of anatomy as did the boys of Towles' classes? And absorbed it in such a way that they could actually see in their "mind's eye" all the important details of gross anatomy. And what was the secret of the teaching of this great anatomist? He forbid the use of the text book and required the men to study, and repeatedly study, on the cadaver, all the major and minor details of human anatomy, until it was impossible for them to ever forget it.

If the "Towles plan" could be followed through physiology, chemistry, materia medica and the other branches of medicine and surgery, eliminating and simplifying in every direction, I believe that great good would follow. and our graduates would develop more certainly and rapidly into practical physicians.

The plan of having a year devoted to preliminary study is a good one, and we should go further, and advise all prospective medical students to take up in their academic years, those branches most helpful to the study of medicine, especially Latin. Probably the most neglected branch of academical education is spelling. Years ago it was a disgrace to be a bad speller, now it seems to be the fashion. No one should be allowed to graduate in medicine who makes gross mistakes in spelling,

With the development and strengthening of our medical schools radical changes should be made in the plan of selecting and arranging the faculties. With the possible exception of the professors of clinical medicine and clinical surgery, they should all of them be paid enough to devote their entire time to the work. They should all be *trained teachers* capable of imparting knowledge in an *attractive* and *impressive* way.

The proposed sixth or hospital year would be a marked advantage. There are many things in practical medicine that cannot be learned from text books or lectures, and in surgery it is impossible for a man to acquire the necessary technique without a practical hospital course. Only those men who have served in good hospitals can appreciate the importance of learning practical work from seeing it properly done and assisting in the doing of it.

But with *all of these advantages* it is *persistent* and *continuous application*, combined with a *desp personal interest* that makes the medical man or surgeon successful.

Both in the school and hospital, the young men should be taught to pay more attention to the sympathetic handling of their patients, to be gentle, kind and considerate, never

forgetting the "Golden Rule."

When one starts out into the general practice of medicine after a good college and hospital course, even then his medical education has in a way only just begun. He must study each case and condition which he meets with, making free use of common sense together with his theoretical and practical knowledge. He should learn from every source both high and low, being always anxious to make himself a better and more useful physician. *The doctor who "knows it all" is a dangerous man.* He is content with his own knowledge, is not willing to learn from others, gets into ruts, and never progresses. There are unfortunately some such men who today are practicing the same medicine that they knew when they left college, possibly many years ago, They know but little of the great advances that are being made from time to time.

The man who really knows most in our profession is always modest, always reaching out for more knowledge, always ready and anxious to improve and develop.

In recent years marked changes have taken place along these lines. Practitioners the world over are "getting the habit" of interchanging knowledge, of learning from each other, of seeing the work that others are doing, attending society meetings and of studying advances. This is truly an age of progress and development in medicine.

Those splendid teachers at Rochester, to whom all honor and glory is justly due, have undoubtedly done the greatest work in stimulating this desire for knowledge and advancement. Other clinics, and especially those in Chicago and Cleveland, are daily disseminating among our profession the principles of safety, thoroughness and advance.

The time has come when it is not a question of choice with the medical man. In order even to continue to be a good doctor he must be constantly educating himself. He must, whether his patients like it or not, attend clinics and medical meetings, and he must read the Journals.

The most useful of the many good points about the County Society plan of organization, as developed by the American Medical Association, is the opportunity it gives the local medical men of improving their medical knowledge. Every county in each State should have a society, and every reputable man should belong. The meetings should be held monthly or oftener, and there is no excuse for the Doctors not attending. Where the plan is being properly worked out, the meetings are so attractive that they are being fully attended and enjoyed. At these meetings reports should be made by those who have visited other societies, the journals discussed in detail, symposiums developed, cases reported and views exchanged. These local societies are the *back bone of medical organization*, and in an educational way are already doing tremendous good.

Unless we soon discover a cure for cancer, *that disgrace to our profession*, our only hope of lessening its ravages is through the influence of the local societies. With all the advances that have been made in preventive and curative medicine, through which tuberculosis, diphtheria and other fearful diseases have been so effectually dealt with, does it not seem dreadful that cancer is positively on the increase all over this country. About 80,000 people are dying from it each year in the United States alone. Leaving out of consideration the possibility of the discovery of a specific cure for the disease, this condition of affairs appears doubly bad when we realize that cancer is a preventable and curable affection if taken in time.

In the history of medicine there never has been a disease about which so much dangerous ignorance and misunderstanding existed both among the profession and the public. The *danger signs* of threatening or developing cancer are so plain, though often slight, that it is inconceivable why the public has so long remained in ignorance about them, and why the members of the profession have so often misunderstood the subject and its vital importance.

At least 90% of cases of cancer are either preventable or curable and yet, as a matter of fact, 95% of them die! What a fearful discrepancy! And due to what? Ignorance!

The public has all kinds of misconceptions about the disease, and a large proportion of the profession is not doing what it should in educating the public and looking for the danger signs. What more important is there in medical education than this?

The time is coming when through the Cancer Education Societies, usetul knowledge of the subject will be spread broadcast everywhere.

But why should we wait? The County Societies should take this matter up, discuss it in all its details, and take the necessary steps to afford prompt relief.

The members of this society are all of them, I am sure, fully alive to the importance of the subject. Let each one of us resolve that when he returns to his home he will take the matter up vigorously in his own community. There are undoubtedly many difficulties in the way. The public has a radical misconception of the subject. They do not realize that cancer essentially is not an extraneous disease but simply a rapid growing of certain cells of the body;

"normal tissue gone wild," and that this abnormal and dangerous growth is due chiefly to continued and prolonged irritation. They do not understand that cancer is in the beginning entirely *local* and may be cured by *prompt local treatment*. They should be taught that abnormal lumps and sores of all kinds should be looked after, that continued digestive disturbances, gall bladder attacks and the like lead to cancer. That in women all abnormal discharges and irritations may lead to cancer unless promptly treated. The whole question of cancer education is so simple that it is difficult to understand why it does not take with the people.

One great drawback in the work of the general practitioner, particularly in the country, is that as a rule he does not have the facilities for thorough examinations and local treatment, especially in diseases of women. I have always advocated that every such physician should have an hour set apart two or three times a week for the examination and treatment of diseases of women, at which time he should have a woman attendant to assist him. In this way only will he succeed in getting such cases to come to him for attention.

Medicine is getting to be such an extensive art that the careful physician is overwhelmed with the amount of knowledge and equipment required to keep active and up-to-date. The remedy probably lies in the formation of co-partnerships, either partial or complete, through which each member of the firm perfects himself along certain lines depending upon the others for help in their specialties.

In recent years there has been an unfortunate tendency in the profession *to rush into surgery*, which seems on the surface to be so attractive and possibly remunerative. The result has been that in many communities *everybody does surgery* and medicine is fearfully neglected. This is a most erroneous and short-sighted policy. Medicine today offers a far more productive field for the practitioner. In that line more advances are being made and there are greater opportunities for good work and development. More thorough examinations should be the rule, with more attention being paid to pathology, diagnosis and treatment. The medical man's advice and co-operation is of invaluable aid to the surgeon, even in cases which are strictly surgical. Preventive medicine is making more rapid and far-reaching strides than surgery, and is doing so much good in community work that we cannot help but feel that if the same thoroughness could be applied to the individual, a great deal more sickness still would be prevented. This, of course, leads naturally up to the employment of medical men to study the individuals and the families, to keep them well and prolong their lives. I believe we are rapidly coming to some such system, the details of which will have to be cautiously worked out by our State medical organizations.

Referring again to the prevailing tendency for men to rush into surgery it is hard to understand. Thorough hospital training is absolutely essential to the making of a surgeon and it must be exceedingly unsatisfactory for a man to do surgical work who has not had such training. There are so many details both large and small that go to make *succesful and safe surgery*, that it seems to me that surgery done in a half way fashion must be the most unsatisfactory of all medical work as well as the most dangerous.

The organizing of the American College of Surgeons after the plan of the Royal College of Surgeons of England is a splendid step in the right direction. Its object is to elevate surgery and separate it from medicine. It is the distinct purpose of its founders, not to keep men out, but to take into its fellowship *every worthy and well trained surgeon*, and eventually *to educate the public against unskillful surgical work*.

These rambling thoughts are presented to you for what they are worth, with the hope that they may do even a little towards the elevation of our profession, the raising of our standards and the development of general medical education.

Gastrostomy; Report of a Case.

By Henry Norris, M.D., F.C.S., Surgeon to the Rutherford Hospital, Rutherfordton, N. C.

The operation of gastrostomy since its first performance in 1840 by Sedillot has been done many times for stricture of the œsophagus, either benign or malignant, and for pyloric obstruction in late malignancy, but in the latter condition it is not as good an operation as a jejunostomy with gastric lavage. The primary object of the procedure is to provide an adequate opening into the stomach for the administration of food, but it is equally important that the opening shall be so constructed that there will be no leakage of stomach contents after the injection of nourishment, as the gastric juices are most irritating to the skin and cause a very distressing dermatitis. In benign cases gastrostomy should not be performed if the patient is able to swallow liquid food and there is reasonable hope of dilating the stricture, but on the other hand if difficulty in swallowing liquids is experienced, accompanied by steady loss of weight, the operation should be done before

the patient is in extremis, else a high mortality cannot be avoided. All the different operative methods which have been devised have in common the object of preventing leakage, but personally, the operation of Senn appeals to me on account of its mechanics, the ease with which it can be performed and the results which have been obtained. In the case in which I am reporting I did a Senn's gastrostomy with an ideal outcome.

CASE REPORT.

The patient was a baby of thirteen months who was referred to me by Dr. Shoemaker, of Shelby, N. C. Briefly the history was as follows:

Birth was normal and the infant was perfectly well until four months ago, when it swallowed some lye. The parents soon noticed that it was having difficulty in swallowing and that it was falling off in weight. This condition steadily increased until, on its admission to the Rutherford Hospital on June 23rd, 1912, the baby was shockingly emaciated and weighed only eight pounds. The pulse was barely perceptible and the child gave frequent, feeble wails. On holding out to it a cup of water it grasped eagerly at it and made desperate efforts to swallow some of the fluid, which act was promptly followed by regurgitation. On attempting to pass the smallest bougie an apparently impermeable stricture of the œsophagus was encountered at a distance of four and one-half inches from the teeth. The parents stated that the child had not been able to swallow water for forty-eight hours. Under very light ether anæsthesia an incision two and one-half inches long was made from the ensiform downward in the median line. The stomach which was empty and shrunken was pulled up into the wound and surrounded by pads wrung out of hot saline solution. A small opening was then made in its anterior wall and a rubber drainage tube one-quarter inch in diameter was passed for half an inch and anchored by two sutures of chromic gut; one on either side, which included all the coats. A circular suture of plain catgut was then introduced at a distance of one-quarter inch from the tube, which included the serous and muscular coats of the stomach only, and which inverted the stomach about the tube. Two more circular sutures were then placed about a quarter of an inch apart and tied, further inverting the wall and producing the funnel-like protrusion within the stomach which is the salient point of the Senn operation. Another suture of catgut was then passed through the peritoneum at the upper angle of the wound, through the serous coat of the stomach and out through the peritoneum on the opposite side, thus lightly anchoring the stomach to the parietal peritoneum. Catgut was used in the peritoneum and fascia and four sutures of silkworm gut included all the tissues down to the peritoneum. Skin edges were approximated by clips. As the child had a very small quantity of ether and the operation was completed in a short time its condition afterward was as good as before, and on its return to bed it was at once given three ounces of milk with fifteen drops of brandy through the tube. It was fed at regular intervals with milk and water and later with broth, and was encouraged to try to swallow liquids. The child put on flesh in a remarkable manner and left the hospital on July 21st, 1912, having gained five and one half pounds in four weeks. At no time was there any leakage about the tube. Efforts at dilatation of the œsophageal stricture did not meet with much success, though a few days after operation a filiform could be passed. When the child left the hospital it could swallow water or milk in small quantities and the mother was advised to make the baby try to get down some liquid every day by the natural channel. In April, 1913, the child was brought back by its parents to have the gastrostomy closed. On examination I found, much to my surprise, that the stricture had become sufficiently dilated to permit the passage of semi-solid food in small amounts, and thinking that if the artificial opening were closed even further dilatation might occur, I removed the tube, brought the edges of the wound together, and covered it with a pledget of non-absorbent cotton secured by adhesive strips. In a few days the sinus closed and the child was discharged, weighing at this time twenty-three and three-quarter pounds. I heard quite recently that the baby is able to swallow more easily and that her general condition is excellent.

Empyema, with Report of Three Cases in Same Family at the Same Time.*

By Foy Roberson, M.D., Durham, N. C.

Thoracic empyema, or purulent pleurisy, occurs most frequently as a complication of croupous pneumonia, and the pneumococcus of Fraenkel is the most common organism found in the pus. However, thoracic empyema is occasionally found complicating other infectious diseases, especially scarlet fever. In the days when child-bed fever was most common thoracic empyema was not infrequently met with in puerperal women. Penetrating wounds of the chest

*Read before Sixth District Medical Society of North Carolina.

may be followed by empyema.

Next to the pneumococcus, we find the ordinary pus organisms and then tubercle bacilli in the bacteriology of empyema.

As regards age, the condition is most common in children, and males are attacked more frequently than females.

In this paper I shall limit myself to purulent pleurisy complicating pneumonia, of which I shall report three cases occurring in the same family, and strangely enough, each case represents a different type of empyema anatomically.

Pneumonia is an infectious disease, the pneumococcus being the most common exciting organism, and while it does not show any special tendency to appear in epidemic form, repeated instances have been noted of its endemic occurrence, usually in jails, asylums and large tenement houses. When it does occur in epidemic or endemic form it has been observed that some particular symptom manifests itself in a majority of the cases. In one instance, diarrhea may be a symptom common to a large percentage of the cases. In another instance, pleurisy may be constantly noted giving rise to much pain and discomfort. An individual endemic or epidemic may assume quite a malignant type, and lots of the cases end in death from profound toxaemia, on the other hand practically all the cases may be unusually mild with a large percentage of recoveries. While it is by no means a common occurrence, it can readily be seen that empyema might be a common complication of pneumonia occurring in endemic form. In reviewing the literature, I have found but one report of such an instance and that was by Musson, of Norborne, Mo., who in 1909 reported in American Medical Journal seven cases of empyema occurring in fourteen cases of pneumonia with one death.

The cases I am about to report occurred in the practice of Dr. E. A. Abernathy, of Chapel Hill, and to him is due the credit of the diagnoses.

Case 1.—Janie M., 2½ years of age. Family history has no bearing on the case except that the father had an attack of pneumonia some two years ago and made a good recovery. This child had always enjoyed good health until February 19 of this year, when she was suddenly taken ill with fever, nausea, and vomiting, accompanied by a severe cough. Examination of the patient revealed a consolidation of the lower lobe of the left lung and the diagnosis of croupous pneumonia was made. She went along for a week or ten days when the temperature began to fall by lysis. At the end of the second week the temperature reached normal but remained so but a few days, when it began to range from normal in the morning to 102-3 in the afternoon with the pulse accelerated in proportion to the temperature. The chest had not cleared up as it should have and empyema was suspected. The diagnosis was confirmed by exploratory puncture. The patient was then sent to the Watts hospital for surgical treatment.

On admission to the hospital the patient was found to be well nourished and in fair condition. Examination of the chest revealed hyper-resonance over the entire right lung and upper part of the left with exaggerated breath sounds. Over the lower part of the left lung the note was flat to percussion with breath sounds retained but diminished. Nothing else noteworthy in the physical examination except marked herpes of both lips.

Operation.—Under ether anaesthesia, an intercostal incision was made in the sixth interspace, mid-axillary line. A large amount of thick greenish colored pus with little odor was evacuated. Rubber drainage tube inserted and the patient returned to bed in fair condition.

Progress.—Reacted well from the anaesthetic and operation. Drainage was fair but she continued with a little irregular fever with accelerated pulse. Examination of the tube showed it to be compressed between two ribs, so as to prevent free drainage. She was again anaesthetized and a portion of the sixth rib resected. After this recovery was uninterrupted and she was discharged from the hospital April 20, entirely recovered.

In this case the pus was not encysted in any way, being an example of empyema of the general thoracic cavity.

Case 2.—Chas. M., 5 years of age, a brother of the first patient. Taken ill with a well defined case of croupous pneumonia March 4th, 14 days after the sisters illness began. Temperature remained elevated for eleven days and terminated by crisis. Remained normal for two days and then began with remissions in the afternoon to 102-3. Again empyema was suspected and diagnostic puncture confirmed the diagnosis.

Upon admission to the hospital this patient was found to be in good general condition considering an attack of pneumonia. His temperature was 102, pulse 120, respirations 30. The chest showed hyper-resonance over entire right lung and upper part of left. Flatness to percussion over lower part of left.

Operation.—Ether anaesthesia, incision in sixth interspace, mid-axillary line. About one ounce of pus was found, a finger introduced into the wound met with many

soft adhesions but no pockets of pus.

Progress.—Reacted well but did not drain any after the operation, temperature and pulse remaining elevated. As in the first case the patient was again anesthetized and a portion of the sixth rib resected. This time pus was found between the lobes of the left lung. Rubber drainage tube inserted. After this the patient was improved for a time, draining well for about a week when it stopped. Fever and accelerated pulse continued. The tube was examined and found to be patulous. Thinking that there might be another accumulation of pus, he was given a few whiffs of chloroform and the old wound explored with the finger. No pus was found. Since that time his pulse and temperature have remained practically normal.

This case is an example of inter lobar empyema.

Case 3.—This patient was the mother of the first two patients and was taken ill at the same time as case two. She ran a typical course of croupous pneumonia, temperature ending by crisis and rising again a day or so later. In this case the pus was found encysted between the diaphragm and the under surface of the right lung. She was much sicker than the first two and her convalescence was rather stormy, but she finally made a satisfactory recovery.

The unusual features of these cases are as follows:

(1) Three cases of empyema in the same family at practically the same time.

(2) Cases two and three were taken at the same time and just two weeks after case one, showing that they were probably infected by case one.

(3) Case one was empyema of the general thoracic cavity, case two inter-lobar empyema and case three diaphragmatic empyema.

In the post operative treatment of these cases it was found that Wrights solution as suggested by Royster in a paper read before this society one year ago, aided greatly in clearing up the pus. They were made to use the blow bottles to help expand the lungs, and they were fed liberally.

In operating on empyemata of the general thoracic cavity I believe that the proper place to resect is the sixth rib in the mid-axillary line, this being the last point of expansion of the lung. Occasionally aspiration will cure an empyema, especially in a child, but as a rule free drainage is the safest plan except in tuberculous empyema and in these cases aspiration should be the rule and not an open operation.

Duke Bldg.

NOTE.—Feb. 26, 1914, one year after this paper was written all the patients are enjoying good health and seem none the worse for having suffered with empyema. The almost perfect restoration of lung capacity and function was doubtless due to the early diagnosis in each case, followed by immediate operation before the process had time to become chronic.

Diagnosis and Treatment of Genito-Urinary Lithiasis.

By D. Y. Keith, M.D., Louisville, Ky.

Since Leonard in 1898 showed the first kidney stone in the world by the use of the Roentgen rays the diagnosis of the different pathological lesions of the genito-urinary system has been improved until at the present time we feel we can make most accurate diagnosis in the greater number of patients presenting urinary symptoms.

To make a satisfactory study in many of the cases requires a great deal of work and time, taxing the acumen of the best clinicians. In all sufferers of pain referable to the urinary system, an accurate clinical, chemical, microscopic, cystoscopic and Roentgen ray examination should be made. It is only by checking these methods, one with the other, or as many as possible, that you can arrive at conclusions free from error, or at least satisfactory to the conscientious, careful worker that he has done all for his patient that is required by the most scrutinizing critic.

Clinically the basis for kidney stone is lumbar pain, intercurrent attacks of nephritic colic, slight albuminuria with a few hyaline casts, hæmaturia, renal tenderness and the finding of gravel or fragments of stone in the urine. If the calculus passes out of the kidney pelvis the symptoms it will excite as it courses along the ureter are pain in the back, radiating toward the lower abdomen anteriorly and to the head of the penis, or into the scrotum with retraction of the scrotum and cremaster muscle. In marked cases it is retracted to the internal abdominal ring. Should it cause enough irritation and swelling of the mucous membrane of the ureter, even though very small in caliber, obstruction with dilatation and the formation of an abdominal tumor upon the affected side can and does occur, with as much acuteness as if the stone was a large one; the ureteral canal being blocked in either case. This has recently occurred in my experience in which the attending physician made a diagnosis of appendicular abscess on account of a tumor in the right side, pain, rigidity and slight elevation of temperature. The abdomen was opened by a very competent surgeon, the peritoneal cavity was found to be free from any lesion and the appendix was very healthy. Deep

down in the pelvis at the uretero-vesical junction a stone was felt the size of a grain of wheat. The abdomen was closed and on vaginal examination the calculus could be felt. Upon inserting a ureteral catheter the tumor gradually disappeared as the urine drained away. The catheter was left in place and a radiagram made showing the stone. A few days later an injection of five c.c. of olive oil above the stone caused its passage into the bladder from which viscus it was easily removed with the operating cystoscope.

Just to show the value of the Roentgen rays, a few months ago a patient was sent to the laboratory for a radiogram of the coccyx on account of pain at this location; to every one's surprise a stone the size of a small grape was seen impacted in the pelvic portion of the right ureter. Upon close questioning we found that the patient had had a few attacks of very frequent urination, which he attributed to slight stricture of the urethra as a terminal sequlæ of an old gonococcic infection.

After a calculus once leaves the pelvis of the kidney it rarely ever is forced to this location again and may be found at any point from the kidney pelvis to the end of the urethræ in either sex. It must be remembered that a stone after it reaches the bladder in the female is expelled with a great deal more ease than in the male. The most frequent points of impaction are at a point one and one-half inches from the kidney pelvis; second, where the ureter crosses the iliac artery and at the uretero-vesicle orifice, sometimes being within the wall of the bladder. In the male urethræ it may lodge at any point but is most frequently found in the prostatic portion or just behind the meatus, requiring quite often a meatotomy to extract the calculus.

The diagnosis of prostatic or urethral stones is quite positive and easy to determine by palpation with the finger. Prostatic stones may be carried for years without the patient's knowledge, as they may not give any symptoms until large enough to cause distress from pressure or rupture into the urethræ causing a complete urinary obstruction. Prostatic stones may be a single large one or many small ones; the number varies in proportion to the size. Where a large number are found they are usually faceted. In many cases they are found by accident as in a recent case of the author's, in which multiple prostatic stones were found while making a routine Roentgen ray examination of the genito urinary system for symptoms of stone in the right kidney. In this case some sixteen or eighteen calculi were found in the right kidney area which was destroyed by a large abscess; the right ureter being blocked by four or five large stones just an inch or two above the level of the crest of the ilium. Two calculi, the size of a small grape, were found impacted in the left ureter near the uretero-vesical orifice. Some twelve or fourteen stones were seen in the prostate which had not been previously suspected.

The character of the chemical elements in urinary calculi is hard to determine by macroscopic examination, as the size and shape vary from the size of a grain of sand to that of a goose egg. The color may be gray, light yellow, dark or even black, being in many cases of a compound composition, i.e., uric acid, oxalate of lime, phosphatic and sometimes cystin and xanthin are found in their makeup; it being very rare to find the entire bulk made up of a single concrement.

Some authors claim two-thirds of all urinary calculi are uric acid in origin, stating that the oxalate stones ordinarily show a nucleus of uric acid. The nucleus in many are made up of epithelial structure, a blood clot or some foreign body, such as a hair, bone, pin or metal of some kind. Possibly in a majority of the bladder stones in children the nucleus is some foreign body such as pins, buttons, hairpins, wax, etc.

In a few cases the radiogram may not show the stone which can be shown by pyelography, which should be done if the symptoms demand in making a positive diagnosis of calculus. Blood is found in the urine in about 80% of all cases when examined microscopically[1]. Albumin in quantity enough to detect in 50%. Spasms of the abdominal muscles upon the affected side is found in over 90% of cases, and in cases where the stone is expelled spontaneously the muscles may remain rigid for six or eight days after the stone has passed.

Treatment.—The preventive treatment of urinary lithiasis is indicated as soon as sand or gravel is passed in the urine, or when a microscopical examination reveals that there is an excess of the solid constituents in the urine. Should uric acid be found as the principal ingredient out of door exercise, hot baths, restraint from alcoholic drinks, ingestion of large quantities of water and a careful regulation of diet is indicated.

Should calcium oxylate be found in the sediment, in addition to the above preventive measures dilute nitrohydrochloric acid should be pressed into service.

Deposits in alkaline urine should put you upon your guard to overcome any infection and render the urine acid in reaction.

Among the foods restricted in persons suspected of lithiasis may be mentioned sugars, dark meats, rhubarb, asparagus, tomatoes, highly seasoned foods, straw-

berries and malt liquors. Also impress the patient with the necessity of drinking large quantities of pure water.

If a patient is first seen during an attack of nephritic colic it is wise to give a full dose of morphine, induce primary anesthesia by inhalations of ether, put your patient in a hot sitz bath, instructing him to urinate while in the bath to overcome the distressing desire to urinate. By this mode of treatment you may get complete relaxation, enabling the patient to pass the calculus into the bladder. Should you be successful in getting the stone into the bladder your work has been of inestimable value to him, for which he will ever be grateful.

When the attacks are recurrent and not an acute obstruction the outline of treatment should be aloug the medical line for four or five weeks. F. S. Watson[2] of Boston, has given the following line of medication with success: Spirits of turpentine ten minims three times a day in capsules, milk diluted with 25% solution of warm water. The patient is allowed fish, dry toast once each day, and an abundant amount of water to drink. This is kept up for six days, then a rest of two days, then the treatment is resumed again. If after treatment for four or five weeks no calculus is passed and the attacks are still recurrent he advises surgery. In 87% of 54 cases thus treated the patients expelled the stone spontaneously while under treatment. All cases were cured absolutely except six, of which he labels recurrences, these being again relieved by the same line of treatment. In seven cases when the calculus was small he failed.

Mechanical Treatment.—We are convinced by a few very gratifying experiences within the past year that before surgery is resorted to it is much more conservative and more acceptable to the patient to try some of the following mechanical means:

Cystoscope examination and the introduction of the ureteral catheter up to the stone; in case the caiheter cannot be passed beyond the stone the injection of a weak adrenalin solution followed by a few c.c. of sterile olive oil. In a few days this treatment is to be repeated, at which time you quite often meet with less resistance at the location of the calculus, or you may be able to pass the catheter beyond the stone into the kidney pelvis. Should you be able to pass the catheter to the kidney pelvis it is to be injected with eight or ten c.c. of sterile olive oil, or at least enough to cause slight lumbat pain; later it might be followed by distinct nephritic colic. The patient is put to bed for a short time or until the colic has passed away.

A full dose of morphine, a hot sitz-bath to aid in relaxation, with large quantities of pure water to drink, will materially aid in the voluntary expulsion of the calculus. In the hands of a careful manipulator the ureteral catheter is not a daagerous instrument nor should you be fearful of infection. The size, shape, number and location of calculi determine the destructive effect upon the kidney; when located in the ureter or kidney pelvis the damage to kidney structure is greatest.

If a nephrectomy is decided upon most assuredly a functional test of indigo-carmin or phenolsulphonphthlein are the best agents to be used in determining the ability of the other kidney to do the work of the lost kidney.

Should you not be able to get rid of the stone by mechanical manipulation then surgery is to be resorted to, provided the patient is suffering recurrent attacks, or in the event of infection being grafted upon the stone. Cautery fulguration and the operating cystoscope are not to be forgotten if the stone is passed into the bladder or impinged in the vesico-ureteral orifice as they are superior to surgery that causes at least some mutilation of tissue.

Conclusions.—1st. The best guides to instrumental examination are an accurate history, thorough urinalysis, physical examination and the Roentgen rays.

2nd. That all cases should be X-rayed as a routine measure.

3rd. Any person afflicted with lithiasis should be given a course of medical treatment as above indicated if he is free from infection or obstruction.

4. Mechanics should be used in all of the elective cases, especially is this true where the stone is small enough to pass through the ureter.

5. If medicinal and mechanical means fail a final and positive way to cure your patient is surgical removal.

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308 Masonic.

Tubercular Kidney.*

By R. L. Payne, M.D., Norfolk, Va.

Miliary tuberculosis affecting both kidneys may be only one of the localizations of a general tuberculosis, and as such is of no special interest apart from the study of tuberculosis in general.

*Read before Seaboard Medicul Society, Norfolk, Virginia, December 9, 1913.

Of more interest, however, because of the possibility of cure, is that chronic, caseating form of tuberculosis which the older physicians called scrofulous kidney. In this form the disease is usually at first, and for a long time, limited to one kidney, but if neglected, or not diagnosed sufficiently early, the diseased process extends finally to the ureter, the bladder and the remaining kidney. If, however, the doctor is on the alert, the diagnosis worked out early and the diseased organ removed, many lives will be surely saved.

The purpose of this paper then, is simply a plea for the more careful study of these cases, for in quite a large experience we have rarely had a case referred to us until grave bladder infection had occurred and which had not had insult added to the injury of the general health by months of treatment for chronic cystitis.

For many years it was believed that tubercular infection of the kidney was due to an infection spreading from the epididymis, the testicles or bladder, and this error was not discovered until Cohnheim demonstrated the eliminant action of the kidney for tubercle bacilli, and so we came to know the disease is hæmatogenous in origin and in the very beginning may be very limited in the area of infection, while a descending infection of the ureter and bladder is the rule. It is also a well established fact, contrary to former opinion, that the disease is nearly twice as frequent in women as in men, and is much more common in the young than the old.

Symptoms.—The onset of tuberculosis of the kidney is always insidious and there are usually no well marked symptoms of the grave infection present until the disease is well advanced. The constitutional symptoms are those of general tuberculosis, except that as a rule they progress very slowly and a badly infected kidney is often found in a person whose cheeks are flushed with the ruddy glow of health. It is also noteworthy that there is usually little or no rise of temperature unless secondary infection occurs with pus-forming germs. Generally no localizing symptoms present themselves until a focus of infection breaks into one of the calices or the pelvis of the organ, or increasing tumor with tension on the capsule produces pain. The affected organ is not often much enlarged unless as occurs in a few cases late in the disease hydronephrosis supervenes. In fact, in our experience, it is not unusual when the disease is well advanced to find the sound kidney the larger —a sort of compensating hypertrophy having occurred.

Pyuria is one of the earliest symptoms to attract attention and hæmaturia is so frequently one of the first symptoms that Newman goes so far as to say, "Hæmaturia is almost as certain a sign of tubercular kidney as hæmoptysis is of pulmonary phthisis. This statement is no doubt much exaggerated, but in persons affeeted with tubercular kidney, bloody urine is so frequently present that when it occurs without symptoms of kidney stone or tumor of the bladder, it is strongly suspicious of tubercular infection. After all, however, the presence of the disease is rarely suspected until the bladder symptoms indicate the danger. Usually the symptoms are attributed to cystitis and begin with more or less distress in micturition, most marked at first at night, then quickly follow polyuria, pain, vesical tenesmus, turbid and bloody urine. It is also worthy of note that frequent and painful urination are often present before there is any tubercular infection demonstrable in the bladder, and so my experience teaches me that all cases of chronic cystitis should have an early study for tubercular infection of the kidney.

Diagnosis.—Upon early and accurate diagnosis of the condition, alike of the diseased and normal kidney, depends the life of the patient, and yet in a very large percentage of these cases the true condition is not suspected until the disease has made such progress that all hope of cure is out of the question. The diagnosis is not easy. There are no pathognomonic signs. Even the presence of the tubercle bacillus may be due to the eliminant action of the kidney, and unless associated with other symptoms do not prove the existence of kidney infection. The diagnosis is made sure from an association of symptoms and from careful study of these symptoms. In general terms it may be said that polyuria, pyuria, hematuria in acid urine, especially if associated with vesical tenesmus and not easily proven to be due to either gonorrheal infection or the presence of kidney stone, are probably due to tubercular infection of the kidney and should at once lead to a careful study of the causes of these symptoms by specific methods or the reference of such patients to a specialist. One may go even further and say the presence alone of pus in the urine, especially if unaccompanied with pain, demands the most careful investigation and warrants the strongest suspicion of tuberculosis of the kidney until careful study proves otherwise. If pus is found in the urine, then a careful microscopic examination of stained specimens must be made and if there are no microbes present then the condition is almost surely tubercular. (Of course the urine must be taken from the bladder with most careful antiseptic precautions). A study of the urine should now

be made for the presence of tubercle bacilli. Authorities differ widely as to the ease with which they may be found. In our experience they have been found in about ninety per cent. of the cases and Rovsing writes they can be found in eighty per cent. of all cases, but it is undoubtedly true that it is often difficult to find them. They may disappear for days at a time from the urine and then are suddenly present in abundance. In specimens being studied care should be taken to eliminate the smegma bacillus which stains red. If they are not readily found then the whole urine for 24 hours should be sedimented and afterwards the lower strata centrifugalized and carefully examined from many slides, and this study should be repeated for several days. Failing at last to find them present we should next make a guinea pig inoculation which will certainly determine the infection if it be present. If pus and tubercle bacilli are both present, then we may feel sure there is tubercular infection somewhere in the genito-urinary tract.

The next step in the study of the case must be a careful cystoscopic examination, and unless impossible the ureters must be catheterized. The cystoscope may show pus oozing from one ureter if the infection is in the kidney and is unilateral, and if the infection has invaded the bladder one will see miliary tubercles, tubercular nodules or tubercular ulcers more or less scattered over the vesical mucosa, with perhaps marked deformity of one or both ureteral openings. The orifice of the ureter may lie in deep ulceration and be so strictured that it may be difficult to locate and impossible to penetrate with a catheter. It is a mistake, however, to think when there is only ulceration about the meatus of one ureter that the infected kidney is necessarily on that side (Rovsing), for the distribution of the infection in the bladder is often very capricious and the diseased kidney may show no infection about the corresponding ureteral meatus.

The next step must be the catheterizing of the ureters, for in no other way can it be determined whether the disease affects one or both organs. With the catheters in place, the urine is collected in separate containers to be carefully examined for the presence of pus and tubercle bacilli. And next we proceed to test the functional activity of the kidneys, for before we remove one kidney we must know, not guess, that the one to be left is capable of doing the work of both. There is much dispute among the authorities as to the best method of doing this. Rovsing tells us that having collected specimens of urine from both kidneys, we should determine with the Esbach ureometer whether the excretion of urea is normal from one or both kidneys. If it be normal from either, then that kidney is functionating properly, but he declares the converse of this is not true, since many causes may interfere temporarily with the elimination of urea. He declares, however, all other tests unreliable, especially naming the Phloridzin and Indigo-carmine test. Casper and many others commend the Phloridzin test in which one cc. of a freshly boiled one per cent. solution of Phloridzin is injected into the body of the patient and a quantitative determination made from the catheterized specimen of urine, of the percentage of sugar excreted by each kidney. It has been found also that a diseased kidney secretes much more slowly than a sound one, and so much light is thrown upon the functional activity by carefully noting the time of the appearance of the sugar in the urine from each kidney after the injection of the Phloridzin. The technique of this method is troublesome, and both this and the indigo carmine tests may do more harm to a kidney already impaired, but happily there remains a safer, quicker aad equally reliable test of the renal function known as the *phenol sulphone-phthalein* test. In this test the patient is required to drink a pint of water one-half hour before the drug is administered, to stimulate the action of the kidneys, and then with catheters in the ureters a solution of phenol-sulphone-phthalein of known strength is injected into the gluteal muscles. The free ends of the catheters are now placed in separate test tubes containing a small quantity of twenty-five per cent. solution of sodium hydroxide and careful note is made first of the time of the injection of the drug; second, of the time of the first appearance of the red color in each test-tube, and finally with the colorimeter a comparison of the percentage of the drug excreted in a given time by each kidney is determined. In this way a comparison of the functional activity of each kidney can be readily made.

So far, the various steps of this study presuppose our ability to catheterize the ureters, but in some cases the disease is so far advanced that the extent of the infection in the bladder forbids any toleration of necessary manipulation or the ureteral meatus is so distorted by ulceration or diminished in calibre by stricture that it is impossible to pass the catheter and hence the difficulty of determining whether one or both kidneys are affected is much increased. In such cases Pilcher suggests that digital examination of the lower end of the ureter, through vagina or rectum, will show the lower end of the ureter thickened and cord-like on the infected side.

If the diagnosis of tubercular kidney is fairly certain and through inability to catheterize the ureters we cannot determine whether one or both kidneys are infected, Rovsing strongly advises exploring both kidneys by necessary incision, drawing up the ureters on the finger and thus determining whether one or both organs are affected. In support of this advice he gives the history of thirty cases so examined, in twenty-four of which he found unilateral infection and was able to bring about cure by operation.

Treatment.—Just one word as to treatment and I am done. Is there a medical treatment of unilateral tuberculosis of the kidney? Experience answers *no*. The leading Internists concede the only hope lies in surgery, and it seems a well established fact that there is no authentic record of a case cured by medical means. Incomplete operations, attempts at removing diseased foci in the kidney, have proven absolutely disappointing, and nothing short of complete nephrectomy offers any hope. Nephrectomy, if done while the one kidney is infected (even though the bladder is involved) yields brilliant results. As to the care of the infected ureter, authority seems divided. Theoretically it is best to remove the ureter, but this adds much to the danger and shock of the operation, and during the last three years in all our operations we have injected the ureter with carbolic acid, with the most gratifying results.

After the diseased kidney is removed, the bladder symptoms are almost always relieved, but should they persist they should be treated with irrigations of a one per cent. solution nitrate of silver once a week and by daily irrigations (except on the day nitrate is used) of one-half of one per cent. solutions of protargol.

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Uses and Abuses of Forceps.

By Dr. Stanley Matthews, Bunkie, La.

Historically, as far back as the time of Hippocrates, it was recommended in certain difficult cases of labor to seize the child's head with the hand and pull it down. This proceedure was practically impossible until the invention of the obstetrical forceps which permitted their application to the fetus while in the parturient canal.

Generally speaking, the style of forcep used oftenest in the present day consists of two arms or branches curved on the side so as to grasp the fetal head, articulated to maintain their hold, and provided with handles to facilitate traction.

Mechanically considered, forceps are used for four purposes: (1) as a tractor; (2) as a compressor; (3) as a lever and (4) as a rotator. It is as a tractor primarily that we use forceps; their other three functions are incidental to their application. This tractile force should never exceed 70 to 80 lbs. and should be intermittent in character rather than continuously applied.

Forceps are applied either to the presenting head, the aftercoming head or the breech, and the operation is indicated (1) in lingering labor where the natural efforts are unable to effect delivery; (2) when speedy delivery is imperative in the interest of the mother; (3) when speedy delivery is indicated in the interest of the child, as in impending death of the mother or threatening asphyxia of the child. The membranes should be ruptured, the os dilated and the bladder and rectum emptied previous to their use.

The prognosis in forceps cases depends largely upon the conditions preceding and requiring their application, and upon the care, skill and manipulative dexterity of the operator. Other things being equal, the lower the presenting part is in the pelvis, the more favorable.

The foregoing is briefly outlined the classical indications and uses of the forcep as taught at present and advised in the moderu text. The liberty of extending the indications and uses in obstetrical practice is a matter left purely to the attending physician. His opinion at this time prevails and whether he be radical or conservative, his patient is at his mercy. I fully agree with those physicians who maintain that the average normal labor case is a long tedious waiting process when left to terminate naturally, but disagree at once that for these reasons alone are we justified in making use of instruments no matter how adept we may be in making application. As soon as we introduce this instrument into a parturient canal and by palpation lock a vice of steel upon an infant's head, we endanger not only the unborn child's existence but at once imperil the mother's future health and life. There are physicians in active practice who think no more of the application of forceps than they do of a minor surgical operation. Analyzing their reasons for such interference I think they can be arranged into five classes: (1) The busy physician. (2) The ignorant physician. (3) The physician who wishes to demonstrate his skill to the attendants. (4) The commercial physician whose remuneration will be correspondingly greater, (5) and the indifferent physician.

Considering the small per cent. of births attended by the country physician and the large per cent. of this small per cent. which are terminated with instruments, the infer-

ence is clear that they are oftener used than indicated.

That there are well defined, clear cut, imperative demands for the use of forceps no medical man will deny, but their indiscriminate use is a curse to womankind and to our future citizenship. It seems to me that our obstetrical fees should be so adjusted that when we are called to a case of midwifery, that this fee would justify our detention on the case until it has terminated if it be a normal case.

The Importance of the Eye to the General Practitioner.

By W. S. Hodnett, M.D., Danville, Virginia.

While it is very true that an eye specialist should be well versed in general medicine it is also very important that the general practitioner keep in mind the importance of the eye to him as a diagnostic aid. It has been estimated that from 70 to 75 per cent. of the systemic diseases show some manifestations in the eye, so we can readily see the advantage of a thorough examination of this organ.

And then at least fifty per cent. of the diseases and injuries of the eye go to their family physician first, and it is very important for him to be able to recognize the severity of same that he may determine whether he shall treat same or refer it to some one who is better prepared to handle it. In a very large per cent. of the cases of injury of the eye the final outcome of the case is in a large measure determined by the initial treatment it receives.

Among the systemic conditions that manifest themselves in the eye may be mentioned the following: Jaundice very often manifests itself in the eye long before it does anywhere else as a bright lemon yellow tint of the conjunctiva, which might change to a bronze in chronic cases. Syphilis manifests itself in a good many ways, among which are interstitial keratitis, iritis, gumma, choroiditis and vitreous opacities.

When the family physician knows there is a syphilitic taint in the family he should keep a sharp lookout for interstitial keratitis in the child and institute treatment as soon as it appears, as in that way he may do a great deal towards saving the eyes. Syphilitic iritis is easily diagnosed when you can obtain a clear history, and even in cases where there is no history of syphilis a course of mercury will be of marked benefit. Brain tumor of whatever origin, if large or of long standing, is very sure to cause choked disc which should always be looked for. Rheumatism very often manifests itself in the form of iritis, and in every case of iritis it is very important to inquire very closely into the past history of the patient. Nephritis, if acute, often first manifests itself as a puffiness of the eyelids and face, and in a good many cases of nephritis the first intimation the patient has is when the ophthalmologist discovers a well marked case of albuminuric retinitis when looking for something else.

I need only mention the eye picture in exophthalmic goitre, as that is the most prominent symptom in most cases. Phylectenular keratitis and conjunctivitis are strictly local but are caused by the condition of the system, and will only yield to systemic treatment. In cases of sudden blindness look for embolism of the central which is usually due to endocarditis. Retinal hemorrhages usually occur in elderly individuals as a result of diseases of the heart and blood vessels and severe disorders of the portal circulation.

The changes in the fundus in arteriosclerosis are very characteristic, and the ophthalmological evidence may be the first to reveal the existence of this serious vascular lesion. Retinal hemorrhage should always be taken seriously, as it is usually a fore-runner of cerebral hemorrhage. Diabetic retinitis is a serious condition, and its progress is determined entirely by the systemic treatment.

In cases of facial erysipelas always carefully guard against orbital cellulitis which is a grave condition. In cases of purulent conjunctivitis and iritis always look for the gonococcus elsewhere on his person or in his surroundings. Scarlet fever and measles usually start with a catarrhal conjunctivitis, and when these diseases are prevalent you should isolate all children developing a conjunctivitis until a diagnosis is made. Whooping cough very often causes subjunctival hemorrhages. As diabetes is the causative factor in many cataract cases it is a good practice to search for this trouble in all patients past middle life with rapidly failing vision.

Optic atrophy is very often caused by systemic poisoning, and among the more frequent causes may be mentioned alcohol, tobacco, lead, arsenic, etc. On the other hand, the eye itself is often responsible for numerous symptoms located remote from its location, such as errors of refraction causing severe headache, migraine, and backward children. Heterophoria or disturbance of the muscular balance sometimes produces symptoms of neurasthenia in otherwise healthy adults.

Numerous other instances might be mentioned but I think the above are sufficient to convince anyone of the importance of an eye examination. In conclusion, I would like to recommend to the general practi-

tioner an article in the Int. Journ. of Surg. by Dr. J, A. White, entitled "Suggestions About Eye Injuries," as a valuable guide in treating these cases.

Dudley Block.

The Thyroid Pituitary Gland in Obstetrics.*

By B. U. Brooks, M.D., West Durham, N. C.

The purpose of this paper is to bring to your attention the physiological action of the Thyroid and Pituitary glands and the therapeutic value of the extract of these glands in obstetrics.

Physiological investigation has shown that the Thyroid gland discharges into the circulation a secretion which exerts its effect *directly* upon some organs and *indirectly* upon others. probably through the nervous system. The active principle is iodin in Thyroid combination, and the therapeutic activity of the gland is in direct proportion to the amount of iodin present.

Thyroid secretion contains two principal constituents, a nucleo proteid rich in phosphorus and a globulin containing iodin. This globulin increases nitrogenous elimination. Sajous says, "Thyroid extract enhances general metabolism and nutrition by increasing the functional activity of the adrenals, thus augmenting the proportion of oxyhæmoglobin in the blood. As this in turn enhances metabolism in all organs the defensive agents of the blood—phagocytes and auto antitoxin—are increased in proportion."

In some parts of the world we are told it has long been the custom for the parent to measure the circumference of the daughter's neck before and after marriage, an increase in size being regarded as an evidence of pregnancy, the change being due to the relationship of the reproductive organs and the thyroid.

Animals who have had the thyroid removed show greatly diminished sexual and reproductive activity. They either do *not* become pregnant or after becoming pregnant they abort. Other experiments show that *non pregnant* animals exist normally with but one-fifth of the thyroid, while they speedily suffer with convulsions when they become pregnant.

The physiological explanation of this is that the thyroid supplies a secretion to the blood which has an intimate relation to pregnancy. One of the properties of this secretion is the destruction of poisons in the blood, that it produces anti-bodies and opsonins in the blood stream. With the increase then of poisons in the body incident to pregnancy, together with that produced by the fœtus, the function of the thyroid is increased, and hence its enlargement. When its function fails or is lacking in efficiency we have an accumulation of the waste which gives rise to albuminuria, œdema and eclampsia. In such cases the extract of the thyroid gland has been found of great value.

Extract of the pituitary gland has also been found of value in obstetrical work. During the past year pituitary extract has been used many times in obstetrical clinics, but has not become sufficiently well known to be much used in general work.

Pituitary extract, or pituitrin, is an extract of the posterior or infundibular portion of the pituitary gland. When injected into the skin it produces a rise in blood pressure and at the same time it exerts an inhibitory influence upon the pulse rate, causing it to fall from four to seventeen beats per minute. Its action in this respect is quite similar to that of adrenalin except that the action of adrenalin is quite transient, while with pituitary extract the blood pressure remains elevated much longer, in some cases a half hour or more, and the heart action is slowed.

Pituitary extract exerts its influence also upon the kidneys, increasing the secretion, or excretion of urine. Schaefer states that "there can be little doubt that the secretion of the pituitary glands acts normally in promoting the function of the kidneys, and that in anæsthetized animals it promotes a free flow of urine. This may be due to the increase in blood pressure, though Schaefer affirms that it is due essentially to the action of a substance present in the pituitary tissue. This is proved by the fact that if the dose be repeated the second dose is inactive so far as blood pressure is concerned, yet a marked increase in the rate of flow of urine is obtained.

Bearing in mind its physiological action in raising blood pressure, the extract would be of value in shock following an obstetrical operation, or in any other condition in which the element of shock has to be reckoned with; and bearing in mind its effect upon urinary flow it may be used as an efficient remedy to establish urinary secretion in instances where partial or complete suppression of the urine follows labor or operations upon the genito urinary tract. Hofstaetter of the gynecological department of the Vienna General Polyclinic recommends it as a vesical tonic, stating that it permanently relieves seventy-five per cent. of the cases of anuria and dysuria following labor or gynecological operations.

*Read at Sixth District Medical Society in Durham, N. C., May 2nd, 1913.

Pituitrin exhibits its most evident effects upon the uterus itself. Its action here is similar to ergot, and by some it is regarded as the most reliable oxytocic known. It exerts its power, however, only upon the uterus in which labor has previously set in, having no effect upon the pregnant uterus in its normal state of quietude.

In the first stage of labor it exerts a pronounced effect which extends through the second stage, causing stronger and more regular pains, and causing this stage to be more quickly terminated. Extending into the third stage it causes a more rapid expulsion of the placenta and renders the uterus more sensitive and susceptible to the ordinary methods used to induce contractions, and in this way preventing postpartum hemorrhage. Its greatest value is in slow labor in which the pains are of insufficient force to produce birth, or in uterine inertia. It is also of value in incomplete abortion, often causing the placenta to be expelled without any internal manipulation.

Bandy of the University of Breslau, reports its use in ten cases of slow labor, in which cases it was used to stimulate uterine contractions. It was successful in eight, partially successful in one and negative in one. In the eight successful cases labor had been in progress an average duration of thirty-six hours before the pituitrin had been used; after its use there was an average duration of twenty-eight minutes before labor was terminated.

Fischer of the Gynecological Clinic of the University of Wurzburg, reports results from fifty obstetrical cases. He says it may be depended upon as an oxytocic in primary and secondary labor pains, but acts more energetically if labor is well advanced when it is first administered. It does not produce premature birth but is serviceable in cases of abortion and in cases of premature birth that were in progress before its use.

Chronic Constipation Caused by Sigmoid Invagination.* ‡

By Drs. D. W. and Ernest S. Bulluck, Wilmington, N. C.

The sigmoid flexure is the natural storehouse for the feces. It has the longest mesentery, hence it is the most movable part of the colon. When empty this part of the bowel falls within the pelvis, but when filled it rises up in the abdomen and empties vertically into the rectum.

At the sigmoido-rectal junction there is a slight constriction due to the muscular ring, O'Beirne's sphincter, from here down the caliber of the rectum rapidly increases in size. The presence of feces in the sigmoid causes a relaxation of O'Beirne's sphincter just as does the filling of the rectum cause a dilation of the anal sphincter. During defecation, after the fecal mass has passed from the sigmoid into the rectum, O'Beirne's muscle resumes its tonic contraction.

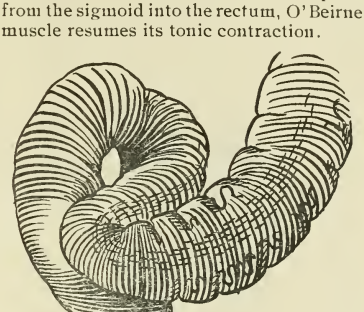

FIG. 1.

Showing Constriction at the Junction of Sigmoid and Rectum made by O'Beirne's sphincter. (Modified from Gant).

From this point the sigmoid worms itself into the cavity of the rectum, pushing the fecal mass ahead, acting as the piston of the syringe the wall of which is formed by the rectum. This is well illustrated in nature by the intestinal protusion which follows the evacuations of the horse.

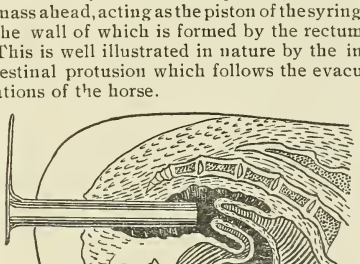

FIG. 2.

Cross Section by Invagination Showing Method of Diagnosis of the Proctoscope. (Modified from Gant).

Etiology.—The sigmoid and its mesentery vary greatly in length. When either are

*Read before the Tri-State Medical Society at its recent meeting at Wilmington, N. C.

‡Throughout this article constant reference is made to the work of Samuel Goodwin Gant.

excessively long there is a tendency for the intussuscepting sigmoid to remain in the rectum after invagination instead of resuming its normal position. The same is true if there is great straining from irregular evacuations or excessive purgation. Again if the sigmoid enters the rectum before its own contents have passed through, it not only has nothing to push ahead but occludes its own lumen so that the feces cannot pass through. Whether the invagination precedes or follows the fecal mass if it does not return to its normal position the result is chronic invagination, causing a partial obstruction with resulting constipation.

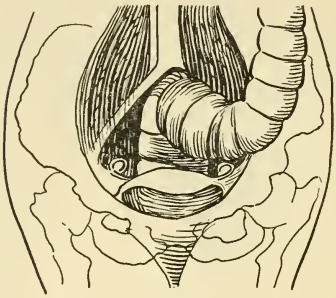

FIG. 3.

Interior View, Chronically Invaginated Sigmoid. (Modified from Gant).

Symptoms.—If the invagination is constant only fluid matter will pass through and this after strong purgation. However, if retained in the rectum long enough to allow the absorption of the fluid, formed stools will follow. The place of affection becomes irritated, inflamed, and excretes small amounts of mucous. This causes some general heaviness and discomfort in the region of the rectum with slight nausea. More common, however, is that condition in which the invagination is not constant but recurs at intervals lasting from days to months. Between these intervals the bowels move reasonably well.

Treatment.—The condition is a surgical one. Purgatives, if strong enough, will move the bowels but they aggravate the condition that causes their use. Physical and medicinal remedies are of little value.

Operation.—(Sigmoidopexy). A two inch incision is made over the left rectus muscle midway between the umbilicus and pubes. The fascias muscle and peritoneum are divided. The Trendelenburg's position is secured and the wound retracted. The sigmoid is located and drawn to the mouth of the wound. If kinked or cramped by adhesions these are removed. A place for suture is selected that will allow about two inches slack between the attachment and the rectum. This prevents tension and allows the normal amount of invagination.

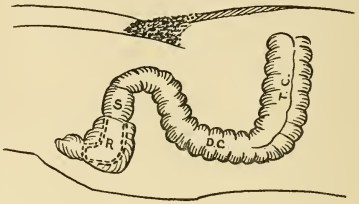

FIG. 4.

Chronically Invaginated Sigmoid seen from the Side. (Modified from Gant).

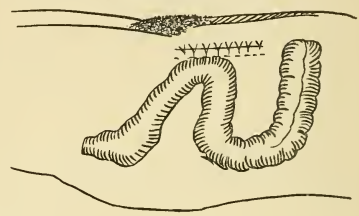

FIG. 5.

Same as Fig. 4, after Sigmoid has been drawn from the Rectum and attached to the Abdominal wall. (Modified from Gant).

At the place of selection three silk sutures are passed through the muscle coat of the bowel on each side about three quarters of an inch apart. The free ends of each suture are then threaded on a large needle and passed through the entire thickness of the abdominal wall, emerging three quarters of

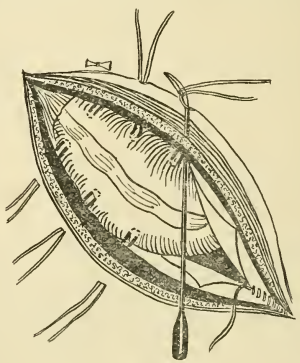

FIG. 6.

Showing Introduction of Sutures into the Sigmoid and their Passage through the Abdominal wall. (Modified from Gant).

an inch from the line of incision. The peritoneal layer is left unclosed over the gut to favor its attachment to the back of the transversalis fascia and the rectus muscle, The abdominal incision is closed and the emerging sutures from the wall of the sigmoid are tied over short segments of rubber tubing to a tightness that crushes the lumen of the tubing. The traction, exerted by the cramped tubing, is sufficient to make the suture cut through the gut wall and come away in about ten to fourteen days, by which time the sigmoid has become firmly attached. The bowels are made to move at the end of a week and the patient is kept in a recumbent posture for two weeks.

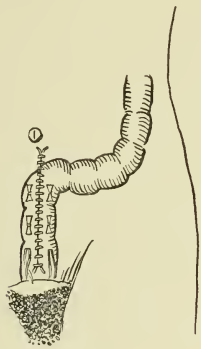

FIG. 7.

Closure of the Abdomen, tying of Suspensory Sutures and New Position of Sigmoid. (Modified from Gant).

A convenient hour for moving the bowels is selected and the patient is required at this hour to sit at the stool daily. At first purgatives are used to overcome atony and establish the habit but these are soon discarded.

Thus far we have operated upon six cases of this kind and all have been promptly relieved in a manner gratifying to both the patient and the physician.

The New Mental Healing.*

By Jas. K. Hall, M.D., Westbrook Sanatorium, Richmond, Virginia.

The introduction of the germ theory into medicine not so many years ago caused all practitioners of the art of healing to hope that at last a cause could be found in the physical domain for each human ailment. And, as knowledge of the life history of these strange germs extended and ripened, it was hoped that by removing or modifying this organic cause all diseases would sometime be curable. In the world of bacteriology and pathology victories over disease processes are being won each year, and the physician is now able to speak authoritatively of many diseases about which he once had to speak evasively. Yet many organs functionate abnormally for which adequate physical cause cannot be found.

This statement applies most forcibly to the human brain, particularly so if one be permitted to speak of it as the seat of the mind. It is well known to those engaged in practice limited to diseases of the nervous system and the mind that the majority of their cases are placed in that category known as functional diseases. The most exhaustive work by diagnostician and by pathologist as well, both antemortem and postmortem, most often cannot find organic cause for the distressing symptoms. Yet, from the days when Juvenal advised parents to pray to the gods that their children might have sound minds in sound bodies rather than to pray for riches, it has been thought that physical and mental vigor and normality were indissolubly associated. Absolutely no physical cause can be found to account for the majority of mental and nervous cases. This statement I believe to be no exaggeration.

As a consequence of inability to discover underlying pathologic physical condition as a basis for many psychoses and neuroses, practitioners in these fields have been forced to view many manifestations once regarded as symptoms now as genuine disease entities. Keen recognition of this fact by many outside the medical profession has made possible the growth of the various kinds of mental healing. Physicians have been forced by these unlicensed practitioners to realize that the mind itself may be sick, and that when disordered, treatment should be directed to it and not to some healthy organ of the body.

The problem presenting itself, therefore, to neurologists and to psychiatrists is to differentiate physical nervous or mental disease from psychological nervous or mental disorder, and to apply the indicated treatment. Disease of organic origin, however great may be the associated mental or nervous disturbance, (for example, paresis) must be treated as a physical disease. On the contrary, psychological disease, if I may be permitted to use the term, should be treated as such. Hysteria, for instance, is not amenable to curative influences by surgery or by the exhibition of drugs.

This new method of viewing and of treating many of the so-called functional nerv-

*Read at the Tri-State Medical Association at its recent meeting.

ous and mental diseases, to which I would very briefly call your attention, is now known as psychoanalysis. It has become both an art and a science. It is both old and new. To some vague degree it has been known since the early days of human history and to some extent it has long been made use of in arriving at the main spring of human conduct. The believer in psychoanalysis believes in evolution as applied to the mind as firmly as in the theory of physical evolution. He asserts with absolute positiveness that thought springs from thought; that idea begets idea, and that speech and behavior, manifestations of ideation, are always absolutely pre determined. It is probably true beyond reasonable doubt that the mental development of the individual reproduces the various mental phases through which the race has passed in its ascent. This charitable view of one's own animal-like impulses, at times, may be made use of in attributing them to unavoidable inheritances Psychoanalysis traces back in the individual to their remotest origin all thought processes, and in certain morbid conditions it undertakes to bring about mental normality by correcting and properly balancing disordered or antagonistic mental manifestations.

This method lends itself to investigation of any mental process, normal or abnormal, for the two differ only quantitatively and not qualitatively. In normal mental functioning—which, by the way, does not exist —the intellect keeps the feeling element in some sort of check; in abnormal conditions feeling colors too heavily the intellectual processes. William James, in that delightful little address, "A Certain Blindness in Human Beings," says: "Our judgments concerning this world of things, big or little, depend on the feelings the things arouse in us. If we were radically feelingless, and if ideas were the only things our minds could entertain, we should lose all our likes and dislikes at a stroke, and be unable to point to any one situation or experience in life more valuable or significant than another. Now this blindness in human beings * * * is the blindness with which we are all afflicted in regard to the feelings of creatures and people different from ourselves."

This matter of feeling causes one at times, willy-nilly, to view certain mental processes in such a light as to give rise to morbid conditions known as distinct diseases. All the neuroses and psychoneuroses and some of the psychoses, perhaps, are due solely to conflicting thought processes, but thought processes heavily impregnated by feeling. The modern theory is that every psychoneurotic symptom is a disguised manifestation of a repressed wish-fulfilment. Two trains of thought, more or less antagonistic, are seeking to express themselves. One thought may carry with it the idea of shame, disgust, and loathing, and be repugnant to the individual's so-called better self. His mental and moral censor, therefore, forces it down; submerges it; puts it out of consciousness, or, as we technically say, it is repressed. It is forgotten, but not dead, and, like hidden infection, it may emerge. In the psychoneurotic the repressed wish does reappear, but so twisted and distorted by the strong censorship placed upon it that its manifestation is unrecognized by the individual. The theory has been enunciated by Freud, the founder of this new psychology, that these repressed wishes are in every case of a sexual nature. We must remember, however, that Freud uses the term in the broadest possible sense, and that the reproductive act is but a single manifestation of this important part of the personality. In this broad sense the term is the main spring of practically all human activity, and it is almost synonymous with Love. In this connection, Ernest Jones quotes Freud practically as follows: "Under certain circumstances, sexual excitations arise that cannot follow their natural course of leading either to physical gratification or conscious desire for such. Being deflected from their aim, they manifest themselves mentally as morbid anxiety; physically, as the bodily accompaniments of this."

From this new point of view one sees in morbid anxiety a manifestation of repressed sexuality, disguised, to be sure, from the individual. Desire that cannot go out and find its mate, so to speak, turns in, and what the patient really constantly fears is an outburst of his own illicit longings. It is but another evidence of that wonderful defence mechanism with which we are so well, or so badly, as we may think, protected. Inflammation and pain subserve the same sort of protective function in the physical domain, yet either may bring about invalidism, and not health. This mechanism underlies the production of all hysterical manifestations, all the obsessions, and the phobias of various kinds. Patients are loath to let go their symptoms, because it is by this method alone that many of them secure sexual gratification. The fact that the individual is unaware of the cause of the condition does not affect the validity of the statement. Much physical ill health is due to organic causes not distinctly localized and not even suspected by the individual.

Sexuality is far reaching in its influence, and the advocates of the psychoanalytic theory may not be going too far in asserting that in an individual sexually normal a neurosis or a psychosis cannot arise. The

ultimate origin of these conflicts is placed in early childhood, and the assertion is made that in all such conditions as those referred to the sexual trauma has taken place before the fifth vear. Sexuality in the broad sense begins probably with consciousness. It is not directed, however, toward reproduction until the so called age of puberty is reached.

The assertion that children are essentially animals, for a time, at least, devoid of all moral sense, should not provoke criticism. In the early days of individual human life all thought is absolutely selfish. The child thinks only of its own comfort and pleasure. Altruism is unknown, both in word and in deed. Individual civilization, refinement and culture, come largely through repression of biologically inherited animal instincts. Repression is preached to the child in the home, in the school, and from the pulpit. For the first years of life children's ears are more familiar with the phrase, "Do not," than with any other.

The importance of childhood cannot be overestimated, Much earlier in life than any of us are aware the mental and moral tendencies develop which are to govern us during the remainder of our days. John Fiske has written an informative essay on the importance of childhood as the developmental period of personality, in which he calls particular attention to man's slow and tedious approach to maturity in contrast with the rapid maturity of the young of lower animals. Solomon says that "Even a child is known by his doings," and nothing can be more important than the command of this wise man: "Train up a child in the way he should go, and when he is old he will not depart from it." How can he? When once moulded, how can the form be changed?

Repressive influences from various sources are constantly brought to bear on the adult race, just as inhibitive influences are exercised over the child in a more restricted field. We are, as a race, inhibited in our tendencies by regard for the opinion of our fellowman, by law, by religion, and by conscience—that quality, whatever it may be, which made Socrates drink the poison rather than run away from death. All government, of whatever kind, is based on this repressive action—the need from the point of view of the general good of suppressing most of our primal tendencies and desires. Autocratic government leaves the censorship in control of one, or, at most, a few; democratic government aims to leave the censorship with the individual; but there never has been and never can be absolute democratic government. Individual liberty is unknown.

The tendency everywhere nowadays is, I fear, to pay less attention to the individual and more attention to the mass. Conscious inhibition or unconscious repression reaches a certain point, however, beyond which it cannot go. In the mass, when this point is reached, individuals bolt the caucus, strikes occur, rebellion takes place, and war is declared against the repressing force. These reactions against extreme repression in organized society are analogous to neurotic symptoms of repression in the individual. But we are slowly becoming wiser, and, when organized signs of social or political unrest arise, conferences are held between the censor element and the repressed element. Deliberate search is made for the cause, and, when found, it is removed or made less active, and in this way political and social health is restored.

By two or three different processes effort is made by this psychoanalytic method to diagnosticate neurasthenia, anxiety states, true hysteria, and conditions manifested by various obsessions and phobias. Explanation of the process is made to the patient, whose hearty co operation must be obtained; and the patient's full confidence in the examiner must be established. To begin with, the usual sort of history may be obtained, but a history which looks more deeply than usual into the individual's moral and psychic life. Action is traced to idea, and idea to idea. The patient is asked to relate all his dreams, for no other process reveals so intimately the inner life of the individual's mind. In the dream, the patient realizes what he subconsciously longs for in his everyday life. Notwithstanding the unintelligibility to the individual of most dreams on account of the protective use of symbolisms, no dream is without deep meaning, and those dreams related most reluctantly, because of their apparent absurdity, or because of their gross character, are generally of most value. Dreams attended by fear are said to be essentially of sexual origin. Another method of reaching the subconscious mind is through free word association. A long list of selected words are repeated one by one in the patient's hearing, and he is asked to respond promptly without restraint with the first word suggested by the examiner's test word. These same words are repeated day after day, and, if the patient always reacts with the same word, it is safe to assume that that particular word represents to the individual an abiding and a more or less dominant subconscious thought.

By this method, and by close observation, it is possible to arrive at an intimate knowledge of the personality. It is possible even to find in the subconsciousness the

origin of motives unsuspected even by the individual. In the inscription, "Know Thyself," carved above the doorway of a Greek philosopher, the implication is clear that no one really knows himself, and that an intimate knowledge of one's self would embrace all knowledge. Consequently, psychoanalysis can be used with value on one's self, if one can be honest with one's self. By it one can search the heart either of self or another. Freud says, "He who has eyes to see and ears to hear, becomes convinced that mortals can hide no secrets. Whoever is silent with the lips tattles with the finger tips; betrayal oozes out of every pore."

But, one may ask, "Canst thou minister to a mind diseased" by such a method? How is it done? The helpfulness of the method. the therapy of the procedure, is based upon the idea that hypocrisy damages, that concealment hurts, and that the repressed longings and desires, whether they be within the patient's knowledge or hidden beneath consciousness in the subconscious, act as irritating foreign bodies in the mental or the moral domain. Unknown or unrecognized, they fail to enter into the stream of thought; they are not assimilated; they remain outside the healthful everyday life to vex and to harass. When these unknown or hidden causes of symptoms are brought face to face with the patient they generally disappear; become absorbed into the stream of healthy daily living, and are forgotten; or else they become transformed into ennobling impulses—sublimed, we say—and the individual is afterwards, in the language of the street, "a different person."

Sublimation of this sort is the wonder of the world. The once gay, giddy, selfish belle becomes sublimed in spinsterhood into the leading figure in all good works; the wild and care-free medical student becomes transformed into a staid and responsible member of a noble profession; the neurotic becomes transfigured into a sane and happy being; Jerry McAuley emerges from the thug into the powerful preacher; and by the sublimation of persecutory zeal Saul of Tarsus becomes the most heroic figure in human history.

Francis Bacon never wrote more wisely than in these lines: "Physicians are some of them so pleasing and comformable to the humor of the patient as they press not the true cure of the disease; and some other are so regular in proceeding according to art for the disease, as they respect not sufficiently the condition of the patient." It would be well for us as physicians to realize that the Kingdom of Heaven is within, and that suffering and misery and sorrow and despair, even death itself, may come from a mind disordered. And is it not time for us to think of other means of righting some of its disorders than by knife and by drug? Can we not understand that riches and unhappiness may abide in the same house; and that joy and gladness may be unacquainted with stocks and bonds?

Omar Khayyam knew that the Kingdom of Heaven, and that other kingdom, too, are within, else he never could have written:

"I sent my Soul through the Invisible,
Some letter of that After-life to spell;
And by and by my Soul returned to me
And answered,'I Myself am Heaven and Hell.'"

Treatment of Trypanosoma Infections.

Ehrlich's salvarsan has shown the most remarkable effect upon infection with trypanosoma, but it remained for J. Morgenroth and J. Tugendreich to show that the effect can be much enhanced by combining salvarsan with ethyl hydrocupreine, and sodium salicylate. The experiments were conducted chiefly on mice, a large percentage of which were rendered permanently free from parasites with these drugs. The ethyl hydrocupreine was superior in every case to quinine and hydroquinone. One great advantage of this discovery is that it is now possible to accomplish results with much smaller doses of salvarsan and thus avoid disagreeable after-effects. Further experiments will be necessary on human beings, particularly in syphilis, and it is also likely that good results may be obtained with ethyl hydrocupreine and sodium salicylate in malaria.—Berl. klin. Woch.

Atropine in Status Epilepticus.

In a report on the treatment of the status epilepticus Dorner suggests, in the absence of a reliable remedy, the use of atropine in large doses. He states that the remedy acts as a narcotic, regulates the bowels and stimulates the heart. In his experience, epileptics will tolerate five times the maximum dose. The large doses are said occasionally to cut short the status epilepticus completely and frequently to render it less severe and to diminish the frequency of its occurrence, thus eliminating danger to life. In a severe seizure, Dorner has given subcutaneous injections of 1 20 grain of atropine sulphate two or three times in the space of twenty-four hours and has thus inhibited the attack. Atropine is also of value in ordinary epilepsy, where a solution of ½ grn. of atropine sulphate in 1-3 oz. of water may be given in doses of 10 to 20 drops, together with preparations of bromine.—Allg. Zeitschr. f. Psych.

Charlotte Medical Journal

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

ANTIPYRETICS.

Possibly acetanilide is the most commonly used antipyretic because it is cheap and prompt in action. Acetanilide is a good analgesic, especially for headache, and as there is usually more or less headache, pain, etc., in most fevers, acetanilide is again given advantage over some other antipyretics.

Acetphenetidin and antipyrine and similar agents act similar to acetanilide, but not as quick. They all have the same depressing effect as acetanilide when given in overdoses and are all far more expensive. The claims that many of the coal tar products are less toxic than acetanilide is false in order to sell them at extravagant prices. Acetanilide is a toxic agent and must be used with care or it will produce bad results. It should be used in the same way that strychnine, atropine, morphine, and other active agents are used. Acetanilide is only adapted to acute fevers and should not be used in continued fevers at all.

Aconite is said to be a good antipyretic, but I find it worthless as an antipyretic or for anything else. Aconite is a drug that could be discarded from the materia medica. Veratrum is said to be a good antipyretic when the pulse is full and bounding, or in opposite indications to the indications for aconite. My experience with veratrum is similar to that with aconite, it is practically worthless as an antipyretic besides being very nauseating.

Gelsemium is worthless as aconite and veratrum as an antipyretic. I have used aconite, veratrum, and gelsemium in all size doses, and the products of all manufacturers. Liquid guiacol applied locally over the abdomen in doses of 20 to 40 drops is a quick action antipyretic in any fever, and will cause a rapid fall of the temperature, just as most any other drug would do. It will cause a depression in over-doses like acetanilide or other coal tar products, hence must be used with care.

The following is known as Pancoast's sweating mixture, and is a good antipyretic as well as a good expectorant:

℞ Aquae camph.	
Liq. ammon. acet.	aa ℥iii
Spts. aeituris nit.	
Saechar	aa 3i
Antimon. et. potass. tart.	
Morphine acetate	aa gr. j

M. Sig.: Dose, one tablespoonful every hour or hour and a half.

Another very similar preparation, without the tartar emetic, is as follows:

℞ Morphine acetatis	gr. j
Sacchar alb.	
Spts. aetheris nit.	aa 3ii
Liq. ammon. acet.	3iv
Aquae camphorae f. s. ad	3viii

Sig.: Dose, one tablespoonful every two or three hours.

Dr. Beverly Robinson, of New York, says that nitre and spirit mindererus are the most innocent and most valuable of all anti-febricants, and that when they do not abate fever in disease it usually means that it depends upon conditions that time and knife alone can change favorably. Sometimes Dr. Robinson combines nitre and spirit mindererus, and at other times he gives them separately. When he combines them he usually puts two drachms of the nitre in two or three ounces of the spirit of mindererus and gives an adult from a dessert to a tablespoonful in a little water every two to four hours. Of course it is understood that in the treatment of fevers we seek to learn the cause and then remove it. The drug antipyretics are used to reduce fever for temporary effect and not to remove the cause. In acute cases with constipated bowels, a dose of salts would reduce the fever, etc. J. A. B.

MEDIASTINITIS.

Since the introduction of the x-ray in medical diagnosis, and in the last few years with the added refinement in detail work and execution of technique, it has been possible to demonstrate and verify, at times, by autopsy, conditions of the chest, including changes in the lungs, mediastinum, and also the heart and the pericardium, that formerly were suspected, but could not be proven.

One very important question in connection with pathological changes in this region concerns inflammatory conditions, involving the glands of the bronchi and mediastinum, and their bearing on so-called primary or incipient tuberculosis of the lung itself. A great deal of work has been done in this field by de la Camp and Reyher, who really have been the pioneers in this department. In recent years the literature on this subject has grown voluminously. In the eleventh volume of the Ergebnisse der Medizin und der Kinderheilkunde, St. Engel contributes a most interesting monograph on the essentials in the diagnosis of enlarged glands in this region, and their relation to the surrounding structures, which

is followed by a detailed topographical study of many cases, including a number of autopsies, the subjects of which were closely observed during life. Unless it is made a routine duty to take the x-ray picture of every child coming under our care, a great number of conditions will continue to be overlooked, until some more or less serious one calls our attention to the probability of infection.

The symptomatology of mediastinitis is very interesting, and varies in its mode of expression in different individuals. While some children show no sign of the existence of these glands, others have a slight degree of rise in temperature. In the more marked cases, the fever becomes the most prominent feature. When the disease has been allowed to progress for a long period, and the glands have grown to a considerable size, symptoms of compression are observed, causing dyspnœ, difficulty in swallowing, and in case of irritation of the pneumogastric nerve, a cough, which may be the only abnormality noticed. If the glands go on to suppuration they may perforate either into the lung substance itself or into one or other of the bronchi, and occasion the most serious complications, ending perhaps fatally. A very interesting case in this connection was reported by Goodman at the last meeting of the A.M.A. at Minneapolis. The mediastinal gland in this instance ruptured into the bronchus, and the child's life was saved by prompt surgical interference.

With the aid of the x-ray, given the presence of the auscultory signs first described d'Espine, the early diagnosis of enlarged bronchial or mediastinal glands has become a possibility. It is the duty of every physician entrusted with the care of infants and children to familiarize himself with the work that has been done in this connection. The successful treatment often depends upon the early recognition of this pathologic state.

Various modes of treatment have been suggested. Plenty of fresh air and sunlight, x-ray, violet rays; the internal treatment by tuberculin, either by mouth or subcutaneously; guiacol and arsenic, etc. Naturally the physician will have to individualize and select the mode of treatment which he thinks will benefit mostly his particular case.

We hope that this short note will stimulate further study and investigation in this very interesting field.

THE HIGH INCISION IN ABDOMINAL CAESARIAN SECTION.

The short, high incision was first suggested by Drs. Davis and Markoe, of New York, and has been employed nearly 500 times at the New York Lying-In Hospital.

This incision has many advantages over the method in general use, and in selected cases a maternal mortality only slightly higher than normal labor, and assures safe delivery of every child alive at the beginning of the operation. I have seen Dr. Markoe deliver a child in 45 seconds by this technic, however, Markoe emphasizes the fact that there is no more necessity for haste in performing a cæsarian section than any other abdominal operation. He states that three minutes is the usual time required to deliver a child.

Bleeding from the uterus never requires the use of an elastic ligature, even with the low incision, besides it is harmful to the child whose vitality is already lowered.

The high incision in the uterus gives less hemorrhage than the low, in eclampsia the uterine incision bleeds slightly. In one case not one-half ounce of blood was lost, although a wait of several minutes was made to allow bleeding.

The Cæsarian section cases that show a mortality are those that have undergone prolonged labor, repeated applications of forceps or other intrauterine manipulations.

The cases operated on before or at the onset of labor that have not been subjected to repeated examination or attempts at delivery by unskilled attendants are practically without mortality.

In central placenta previa with a rigid cervix and viable child cæsarian section is the operation of choice, giving both mother and child a better chance than any other method of delivery.

The following are the usual indications for Cæsarian section: Deformed pelvis, placenta previa, eclampsia with a firm undilated cervix, neoplasms of uterus, vaginal deformities, excessively large child.

SIXTEENTH ANNUAL SESSION TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

The sixteenth regular annual meeting of the Tri-State Medical Association of the Carolinas and Virginia was held in the Elks Hall in Wilmington, N. C., on February 18 and 19, 1914, under the presidency of Dr. Southgate Leigh, of Norfolk, Va. More than one hundred of the leading physicians of the constituent States were registered during the opening session and the total registration was doubtless double this during the two days.

The address of welcome from the local profession by Dr. W. C. Galloway, of Wilmington, fully sustained the eloquent ocu-

lists' reputation as one of our foremost medical orators, while the response from Dr. William Weston, of Columbia, S. C., President of the South Carolina State Medical Association, was of beauteous concept, perfect diction, and delivered briefly but in a true spirit of gracious acceptance that greatly pleased his auditors.

President Leigh delivered a masterly address on Medical Education which held the close attention of the audience for nearly an hour, and which when published will be welcomed as a noteworthy and valuable contribution to a subject of vital and omnipresent importance to both profession and laity. By direction of the Association the Executive Council were requested to have the address given to the public as well as the profession.

Of the forty-five papers listed, a large proportion were read during the two busy, active days of the session, only a few essayists being absent, and a limited number reading only by title. The grade of the papers presented and the discussions elicited, was fully up to the high standard especially characteristic of the scientific work of the Tri-State; the former being as a rule short, crisp, and evidently penned by men thoroughly conversant with the subject in hand, while the latter very forcibly reminded gentlemen not previously members of the organization, of the sharp, pertinent, forceful discussions in the sections of the American Medical Association. An observant visitor was known to remark that the amount of actual scientific work accomplished by the meeting of two days was far in excess of any other society he had ever attended.

The social courtesies of the local profession aided by the hospitable citizens of The-City-by-the Sea were numerous, and replete with that peculiar flavor of graciousness that have made the stranger's welcome in the Cape Fear district of Carolina a joy and delight in realization, and of ever blissful memory afterward.

The cordial welcome of Mayor P. Quince Moore, a short sail down the historic Cape Fear river, the reception at the Elks Club the first evening, the attentions from the Commercial and the Cape Fear Clubs, the felicitous special arrangements effected by that most careful and thoughtful of committee chairmen, Dr. Chas. T. Harper, of Wilmington, the several private dinners from a considerable number of the medical men of the city, all combined, made the social features of the sixteenth meeting of marked character. Lack of time the final day prevented the acceptance of the ride to Wrightsville Beach and the Oyster Roast at that famous resort.

The following officers were elected:

President, Dr. E. C. Register, Charlotte, N. C.; Vice Presidents, Dr. J. Allison Hodges, Richmond, Va.; Dr. Chas. T. Harper, Wilmington, N. C., Dr. F. H. McLeod, Florence, S. C.; Secretary-Treasurer, Dr. Rolfe E. Hughes, Laurens, S. C.

The Association voted to hold the seventeenth session in Greenville, S. C.

RECURRENCE OF BREAST CANCER THROUGH THE DEEP FASCIA.

The frequency of malignancy in tumors of the breast makes their early recognition and diagnosis a subject of paramount importance. When the family physicians and patients realize that thirteen out of every fourteen breast tumors in women over forty are malignant and one half of the benign tumors ultimately become malignant the urgency for an early diagnosis and thorough surgical treatment is apparent. Pilcher states that it cannot be too strongly emphasized that practically every carcinoma of the breast, when it has reached the degree of development by which a palpable tumor is formed, is already in an advanced stage and as a rule metastatic deposits have already occurred.

Unfortunately the diagnostic signs we are taught to associate with cancer are really its complications; when the classical symptoms are sufficient to make a positive diagnosis the case is incurable with the most radical operation.

Carcinoma hardly ever occurs before puberty, sarcoma is also rare in children.

Handley claims that cancer occurs in the fascia and not in the skin and many cases of recurrence are due to neglect of the surgeon to remove the deep fascia over the ribs, clavicle and sternum. Cancer extends through the lymphatics and not through the blood stream.

The lymphatic distribution of the breast is divided into six groups. The earliest extension occurs in the axillary region. Second in the neck; here extension occurs through the fascia and lymphatics over the clavicle as well as under it. Third, through the lymphatics that return with the anterior intercostal vessels to the anterior mediastinal glands; these glands drain the inner side of the breast. Fourth, extension to the posterior group of glands that receives the lymphatics of the internal intercostal muscle. This is the route of extension that occurs when the tumor is fixed to the chest wall. Fifth, across the sternum, and sixth, down the epigastric fascia into the abdomen. A more general use of Handley's operation will undoubtedly do much to lower the mortality of cancer of the breast.

Editorial News Items.

The report of Dr. C. L. Pridgeon, Assistant Secretary State Board of Health of North Carolina for the Eradication of Hook-Worm Disease, for the year 1913 shows the interesting fact that of the 100 counties of the State, 99 have made supplementary appropriations to aid in the work being done by the Rockefeller Foundation and the State Board of Health. Several of the counties which were surveyed two years ago have made appropriations for a second canvass.

Prior to 1913 there were 217,033 people examined in North Carolina for hook-worm, and 88,119 were found infected and treated, or 40.6%. During 1913 107,887 people were examined, and 23,533 found infected, or 21.8%, showing the value of the previous educational work done. In addition the work of private physicians as reported to the State Board of Health in the matter of hookworm shows that prior to 1913 they had treated 40,568, and in 1913 they treated 11,915 cases, making a total treated by private practitioners of 52,473 cases, which added to the above shows that in North Carolina in the past few years, as shown by the records in the State Board of Health office, there have been treated for hookworms 164,145 patients. In addition to making examinations of about one-seventh of the State's population the hook worm staff of the State Board have distributed nearly one million pieces of literature relating to hookworms, sanitation and kindred topics, besides delivering 1,089 public lectures, listened to by upwards of one hundred thousand citizens. This does not include the hundreds of other daily lectures given during the period mentioned by the field demonstrators in making the clinical examinations. The work for 1914 will be prosecuted with increased vigor.

The War Department at Washington, D. C., has designated Asheville, N. C., as the location for a Summer Sanitary Camp and Drilling School for the military forces of the Nation and the several States. A large tract of land lying a few miles east of the city has been purchased, and it is proposed to "summer" several thousand soldiers of the Nation and State Militia there the coming summer.

The Caldwell (N. C.) County Medical Society at its recent meeting elected the following officers: Dr. Gamewell Flowers, president; Dr. C. L. Wilson, vice president; Dr. C. B. McNairy, secretary and treasurer; Dr. A. A. Kent, delegate to the State Medical Convention; Dr. W. I. Pitts, alternate. At this meeting Doctor Gordon of the State Board of Health delivered an interesting lecture on "Vital Statistics," and brought out several matters of much importance to the profession.

A suit against Dr. Benj. H. Greenwood for $10,000 damages for an unsatisfactory result following an injury to the thigh was tried in the Superior Court at Asheville last month and resulted in a verdict for the defendant. A number of Asheville physicians testified in the case which attracted much attention locally and resulted in the complete vindication of the physician.

The Board of Trustees of the North Carolina State School for Feeble-Minded in regular session at Kinston, N. C., on February 17th elected Dr. Chas. B. McNairy Superintendent, vice Dr. I. M. Hardy. The vote was 5 to 7, and ends a controversy that has been waging for several months over the proposition to continue Dr. Hardy at the head of the institution. It will be recalled that Dr. Hardy originally presented the claims of the feeble-minded children of the State to the legislature some years ago, and spent much time and effort in securing the initial appropriations for the erection of the buildings and the organization of the school. During the past few years almost his entire time has been devoted to the interests of the school, but apparently irreconcilable differences as to his fitness to be continued at the head of the school after its opening (shortly to occur) have resulted in his retirement and the election of another by the trustees.

The Board is composed in part of some of the ablest medical men of the State and other citizens of equal responsibility and character, and their verdict will be accepted by the profession as being deliberate and probably well-founded. At the same time, it should be remembered that but for the work of Dr. Ira M. Hardy, while the State would undoubtedly eventually have erected buildings and established such an institution, it certainly would not have been done at this time but for Dr. Hardy's sincere and earnest efforts in arousing public and legislative sentiment in behalf of this afflicted class. In his retirement as the head of the institution he meets the frequent fate of others who have led advanced movements for the uplift of some portion of the people, for it is often noted that individuals who are most active, zealous, and helpful in promoting public sentiment for a given cause are not infrequently, by temperament or otherwise, unfitted in the calm judgment

of others in authority, to successfully cope with the multifarious administrative details so vitally essential to success.

Dr. C. T. Wyche, of Prosperity, S. C., representative from Newberry county, and Speaker pro tem of the South Carolina legislature now in session, was stricken with apoplexy while presiding in the House at Columbia, S. C., on February 12. While apparently recovering, his condition is still reported as serious.

Dr. J. M. Wells has located and will practice at Spencer, N. C.

Dr. W. L. Stamey, who removed from Hookerton, N. C., to Greensboro a few years since, has resumed residence and practice at Hookerton.

Dr. J. M. Harper, of Hookerton, N. C., has removed to Mackelsfield, Edgecombe county, N. C.

Dr. W. H. Wootten, a reputable and well-known physician of Davidson, N. C., was shot by a druggist of the town named Monroe Jetton on February 9, while making a professional call at the home of the latter.

At Four Oaks, N. C., on Feb. 17, 1914. Dr. J. D. T. Wellons died at the age of 86, after having been a practitioner of medicine for 53 years. During the war between the States he served four years as Surgeon in the 51st N. C. Regiment, and after the downfall of the Confederacy devoted himself to the professional care of a Johnston County, N. C., clientele. He was buried with Masonic honors in the midst of one of the largest concourses of his county people ever seen in attendance on a burial occasion.

At Troutmans, N. C., seven miles south of Statesville, on the 16th of February. 1914, there passed from death unto his eternal life, one of Iredell county's most widely known and best loved physicians in the person of Dr. Edmond Emanuel Klutz who for 28 years had ministered to the physical ills of the people of that community. The interment was by the K. of P. Dr. Klutz was a practitioner of ability, a fine type of Southern gentleman and justly popular as physician and citizen.

Dr. Cooper Person, of Pikeville, N. C., was thrown from his buggy in a recent runaway and sustained a fracture of the nose and both bones of the left forearm.

The not infrequent notices in the newspapers, in various sections of the country, reporting the fact that some town or township in the county has quarantined against some other county or village or town, but lends emphasis to the wisdom of the North Carolina legislature that some two years ago abolished the quarantining of smallpox as a State public health function. While nearby States have not done so, and at times there is still heard criticism of the action of the North Carolina authorities in this matter, it is very manifest that the greater attention being given to vaccination in North Carolina than ever before, shows the disposition of the people to protect themselves, which after all is the sensible and the scientific thing to do with regard to smallpox infection possibilities.

The recent session of the Southeastern Sanitary Association discussed topics of vital concern to the public health work of the South at Columbia, S. C., February 12. Pellagra vital statistics and anti-typhoid inoculation received much attention. Capt. J. F. Siler, U. S. A., announced to the convention that Col. Thompson, of the Thompson-McFadden Pellagra Commission, had contributed an additional $15,000 to continue pellagra study.

The newspapers recently reported the arrest of a citizen in Wilkes county, N. C., charged with having tuberculosis. Would it not be well for advanced sanitary authorities to take stock, as it were, and after admitting that probably one-half of the people are afflicted with tuberculosis at some period of their lives, carefully investigate the established facts on which the extreme phthisophobic craze is based, with a view to ascertaining if more than one fourth of the present dread of tubercular infection has any real scientific, or experimental, or clinical basis?

The investigation recently ordered by the South Carolina legislature at the suggestion of Gov. Cole Blease into the conduct of the affairs of the South Carolina State Hospital for Insane at Columbia, S. C., has just been completed and the final report of the investigating committee filed with the body and adopted. The findings of the committee completely exonerate both the able Superintendent and head of the medical staff, Dr. J. B. Babcock, and the capable and efficient lady physician, Dr. Elleanor B. Saunders, of every suggestion of inefficiency, incapacity or wrong-doing of any kind. In addition the Superintendent has been vested by the legislature with the power to nominate for approval by the directors of

the institution, the entire medical staff beneath him, which heretofore has been appointed alone by the board of directors of the hospital. Two more capable and efficient physicians than these two able South Carolinians are in all probability not to be found anywhere in the government service, and both are entitled to receive the hearty congratulations of the profession on their complete vindication at the hands of a painstaking commission.

The North Carolina Society for Mental Hygiene, recently started at Raleigh, N. C., at the instance of Dr. Albert Anderson, Supt. State Hospital for Insane, announces the following officers:

President, Mr. W. A. Erwin; Vice-Presidents, Dr. Ernest Bullock, Wilmington, N. C., Dr. L. B. McBrayer, Asheville, N. C., Miss Daisy Denson, Raleigh, N. C.; Treasurer; Mr. Joseph G. Brown, Raleigh, N. C. Executive Committee: Dr. W. W. Faison, Goldsboro, N. C.; Dr. John McCampbell, Morganton, N. C.; Mr. Clarence Poe, Raleigh, N. C.

Dr. Albert Anderson, Raleigh, N. C., will continue as Secretary, and announces the "purpose of the organization to wage a vigorous campaign of education along the lines of mental hygiene in all parts of the State with a view to bringing about a system of prevention of insanity."

The Merriwether Memorial Hospital and Training School at Asheville, N. C., announces the following staff:

Dean, Dr. C. P. Ambler; Vice-Dean, Dr. E. B. Glenn; Secretary, Dr. W. J. Hunnicutt; Business Manager, D. L. Merriwether; Superintendent, Miss N. F. Pitts.

Department Staff: Medicine, Drs. C. P. Ambler, M. L. Stevens, C. E. Cotten, Arthur F. Reeves; Neurology, Dr. R. S. Carroll; Gastro-enterology, Dr. A. W. Calloway; Genito-urinary, Dr. P. R. Terry; Surgery, Drs. E B. Glenn and F. Webb Griffith; Dermatology, Dr. W. C. Brownson; Pediatrics, Dr. L. W. Elias; Eye, Ear, Nose and Throat, Drs. E. R. Russell, J. B. Greene and R. D. Buckner, all of Asheville.

Dr. J. W. Wallace, of Concord, N. C., has returned to his professional duties after spending some time in New York doing postgraduate work.

Dr. J. H. Teague, of Laurens, S. C., who has been spending some time in postgraduate study in New York, will return to his work about April 1st.

Owing to reported presence of smallpox in Newberry, S. C., the city of Laurens, in the same State, quarantined against the city and county of Newberry on February 15. Later, on the advice of the Secretary of the South Carolina State Board of Health, the quarantine order was revoked and compulsory vaccination ordered in Laurens.

On February 21, a fire in the State Hospital for the colored Insane at Goldsboro, N. C., broke out, which destroyed State property to the value of more than $6,000. Fortunately no lives were lost.

Wm. McLendon, a Chapel Hill, N. C., negro has brought suit against J. C. Scarboro, a negro undertaker of Durham, N. C., for $5,000 damages, alleging the latter sold the body of the father of the plaintiff for $40.00 to the Medical Faculty of the University of North Carolina in 1912, the University authorities refusing, it is alleged, to restore the body to the son unless the money paid for the subject was repaid. This the son declined to do and the action against the undertaker resulted.

The Seventh District Medical Society of North Carolina will hold its second Clinical Conference in Charlotte, March 16th and 17th. The first meeting is to be held Monday evening at 8:30, followed by an informal smoker. Tuesday will be devoted to Clinics.

BOOK NOTICES.

Tuberculin Treatment. By Clive Riviere, M.D., Lond., F.R.C P., Physician East London Hospital for Children, Shadwell, Physician to Outpatients, City of London Hospital for Diseases of the Chest, Victoria Park. Egbert Morland, M.B. & B.Sc. Lond., M. D. Berne, of Arosa, Switzerland, Visiting Physician to the English Sanatorium (Villa Gentiana). Second Edition. Oxford University Press, 35 West 32nd St., New York. 1913.

The fact that another edition of this book had to be prepared in so short a time shows that it was received quite favorably. The editions are much the same save for the fact that the last one is broader, as it contains later and fuller information. The chief alterations are found under the headings: The Tuberculins and Their Preparation; Tuberculin in Mixed Infection; and Ambulant Treatment of Phthisis; but in nearly every section minor corrections and additions have been made.

When to Send for a Doctor and What to do Before the Doctor Comes. By Frieda E.

Lippert, M.D., Assistant at the Psychological Clinic, University of Pennsylvania, and Arthur Holmes, Ph.D., Assistant Professor of Psychology and Assistant Director of the Psychological Clinic, University of Pennsylvania. With 16 full page Illustrations and Frontispiece in color. Philadelphia and London: J. B. Lippincott Company. 1913.

The subject matter of this little book is divided into five main heads, namely: Simple Non-Contagious and Contagious Diseases; Simple and Serious Nerve Disorders; Some Habits of Childhood; Physical and Mental Causes of Retardation; and What to do Before the Doctor Comes.

The plan of the book is different from others in the same field. It catalogs the simple, every-day, well-known ailments by their common names and then describes the symptoms of the harmless indispositions, tells how to treat them, and sharply marks them off from the serious diseases demanding a doctor's advice. It tells when not to send for the doctor, and exactly when to send for him, and what to do in emergencies before he comes. The index is very carefully prepared and enables one to look up immediately any disease of a child. Price $1.25.

Leaders in Homeopathic Therapeutics. By E. B Nash, M.D., author of "Leaders in Typhoid," "Regional Leaders," "Leaders in Sulphur," "Leaders in Respiratory Organs," "How to Take the Case," and "Testimony of the Clinic." Fourth edition, 493 pages. Cloth, $2.50 net. Postage, 16 cents. Philadelphia: Boericke & Tafel. 1913.

A noticeable feature of this fourth edition is that the author has prefixed to each remedy a few of the leading symptoms, the text of the former editions following as a commentary with comparisons. This arrangement naturally impresses the remedies more firmly upon the mind for practical offhand prescribing, as it usually takes repetition oft repeated for the average mind to retain for ready use the salient points in Materia Medica.

A Manual of Venereal Diseases. Introduction by Sir Alfred Keogh, K.C.B., late Director General of the Army Medical Service. History, Statistics, Invaliding, etc., Brevet Colonel C. H. Melville, R.A.M.C., late Professor of Hygiene, Royal Army Medical College Clinical Pathology and Bacteriology, Brevet Colonel Sir William Leishman, K.H.P., F.R.S., R.A.M.C., Professor of Pathology, Royal Army Medical College. Clinical Course and Treatment, Major C. E. Pollock, R.A.M.C. Second Edition. Revised and largely re-written. New matter by Major L. W. Harrison, R.A.M.C., Clinical Pathologist, Military Hospital, Rochester, Row. Published by Oxford University Press, 35 West 32nd St., New York. 1913.

Since the publication of the first edition of this Manual, our knowledge of syphilis, its pathology and treatment, has made very great advances, and this has necessitated the addition of much new matter and the revision of most of the former work. Major L. W. Harrison has practically re-written the chapters on the Pathology of Syphilis and has contributed fresh ones on the treatment of syphilis with salvarsan and neosalvarsan, and also on the vaccine treatment of gonococcal infections.

This volume is thoroughly up to date and very valuable.

Elements of Homeopathic Theory, Practice, Materia Medica, Dosage and Pharmacy. Compiled and arranged from homeopathic text books for the information of all enquirers into homeopathy. By Drs. F. A. Boericke and E. P. Anshutz. Third, revised edition. Philadelphia: Boericke & Tafel. 1914.

This little volume is not designed for a "domestic practice," but to meet the steady call for a small, inexpensive work that would give the enquirer an insight into the theory, materia medica, therapeutics, pharmacy and dosage of Homeopathy. The book is, of course, elementary, but the elements are such that on them can be built a sound structure of curative medicine. It gives the keynotes and the therapeutic range of each drug which serves as a "memory refresher" to homeopathic physicians and a guide to all others.

A Woman's Number.

The May issue of the Medical Review of Reviews is to be a Woman's Number. All the articles contributed will be from the pens of women physicians whose work has achieved national importance. With the growth of the feminist movement, the economic position of women has attracted universal attention. As medicine was practically the first profession open to women, it is only proper at this time to consider whether their entrance into the medical profession has been of benefit.

In order that women may present testimony by which they should be judged, it has been deemed advisable to give them an entire issue to present the evidence of the value of their accomplishments. In the laboratory, in the hospital, in institutions, at the bedside, and in public service, women physicians have performed a valuable func-

tion. As a tribute to their earnestness, enthusiasm, modesty, energy, perseverance, and scientific acumen, the May number of the Medical Review of Reviews will be dedicated to the women physicians of America.

Abstracts of the Leading articles of the month.

The Use of Pituitary Extract in Obstetrics.—Watson (Canada Medical Association Journal) sums up his experience with pituitary extracts as follows:

1. Pituitary extracts have a powerful effect in inducing and in strengthening uterine contractions.

2. The type of contractions induced is similar to that which occurs normally, although at first there may be a tendency to prolongation of the pains.

3. Such prolonged contractions result in slowing of the fetal heart, but the child is seldom in danger.

4. When given in the late part of the first and in the second stage of full time labor the polarity of the uterine contractions is not interfered with, but in early abortions and early in the first stage a simultaneous spasm of the os may occur.

5. Its chief field of usefulness is in the first and second stages of labor, when there is delay due to feebleness of the pains, alone or when combined with other complications, such as malposition of head, malpresentations, multiple pregnancy, slight narrowing of the pelvis, etc.

6. In the induction of abortion, in the treatment of abortion already in progress, and in incomplete abortion, its action is so uncertain that it is not to be recommended, except in cases where the os is widely dilated.

7. In the induction of premature labor its effects are uncertain, but if sufficient dosage be given they may be good.

8. In the induction of labor at full term and after better results are obtained than in premature cases.

9. It gives good results in many cases of postpartum hemorrhage, but is not superior to the various preparations of ergot. It has the power of sensitizing the uterus, so as to allow these preparations to act more powerfully, the combination being most effective.

10. It is a useful adjunct in the treatment of placenta prævia, used in conjunction with rupture of the membranes, the use of the hydro-static dilators, or turning.

Veronal Poisoning.—Willcox (London Lancet) says that it is beginning to be realized that the therapeutic dose of veronal cannot be much exceeded without danger. Five to ten grains seems to be the proper dosage; five grains as a single adult dose, repeated after a reasonable time if necessary, is the safest method of administration.

A special idiosyncrasy sometimes occurs, causing susceptibility to a small or moderate dose. Repeated small doses, as in the veronal habit, may cause toxic symptoms. The toxic symptoms following a single large dose are drowsiness, headache, and sometimes ataxia, accompanied by a reeling gait. The patient falls into a deep sleep, from which he can only be aroused with difficulty. In severe cases the stupor deepens into coma, and the patient becomes cyanosed with rapid and often stertorous breathing. In this stage it is common for a marked rise of temperature, even to 103° F. or more, to occur, and a physical examination of the lungs will probably show areas of dulness, increased vocal resonance, bronchial breathing and moist sounds. In other words all the clinical signs of pneumonia will be present. These signs will be accompanied or followed by those of a general edema of the lungs. When these conditions occur death usually follows in one to four days. Skin eruptions are rare. Urinary disturbances, except albuminuria, have not been observed by the writer.

The symptoms of chronic veronal poisoning consist of an abnormal mental condition, with visual hallucinations and delusions. Tremors and ataxia also occur; there are also disturbances of speech. The veronal habit causes a complete disorganization of the moral sense.

Fifty grains seems an average minimum lethal dose, though deaths are recorded from 15 grains. Tolerance may be established in some cases, but only to a limited degree, not comparable to that in morphine and cocaine takers.

Treatment, aside from gastric lavage, is purely symptomatic. Post-mortem signs are those of death from gradual heart failure, complicated by edema and hypostatic congestion of the lungs. Excretion of veronal is mainly by the kidneys, and is quite rapid. The drug is identified after isolation of its crystals in pure form by various procedures described by the writer.

Thrombosis.—Aschoff (Arch. of Internal Med.). The writer says: First, as to morphology of a thrombus, it is that of the so-called "white thrombus" which particularly interests us, for all red thrombi which occur ante-mortem are found to be built upon a white center or core, the peripheral red portion consisting of secondarily deposited

fibrin, in the meshes of which are all blood elements. The white or central portion has a definite morphologic structure, consisting for the most part of blood platelets, arranged in rings in a remarkably orderly manner. Within this framework is no fibrin. From the periphery, strands of fibrin are seen to radiate out. Surrounding the central portion is a border of polymorphonuclear leucocytes, sharply demarcated from the outer portion, which contains numerous red cells.

The process of thrombus formation begins as a deposit of platelets at some point along the endothelial wall and has some analogy to the deposit of sand in a river bed. It occurs only in a flowing blood-streamr Mechanical factors causing local retardation of flow play an important role. By a process not understood, the deposited platelets become cemented or agglutinated together. Local damage to the vessel wall pleys a lesser role than was formerly supposed; the release of ferments from damaged endothelium possibly induces agglutination of platelets. By the death of the platelets large quantities of fibrin ferment are liberated. The more complete becomes the stagnation the greater is the concentration of ferment. When a vessel finally becomes completely blocked, the blood coagulates en masse up to the nearest branch.

Thrombosis being frequent in cases of sepsis, its localization has been thought to be determined by a focus of infection. The writer is convinced, however, that the thrombus is usually primarily non-septic, being the result of mechanical factors; the few organisms from the blood stream which lodge within it find a favorable spot for multiplication, converting it into a septic thrombus.

"Capillary thrombosis," in contradistinction to "static thrombosis" above discussed, is the result of alterations of the blood itself. It is also called "toxic thrombosis," the alteration of the blood being always the result of some foreign noxious agent. These thrombi occur in the capillaries of certain of the internal organs, particularly the lungs, and may consist of blood platelets, of blood stromata, of disintegrated fragments of blood elements, or of leucocytes. Any of these may be combined. Each may be followed by secondary fibrin deposit. Among the noxious agents responsible may be mentioned hemoglobin solutions, heterologous sera, microorganisms, ether, glycerin, distilled water, etc.

Discussion on Urinary Antiseptics.—Walker (British Medical Journal) gives an excellent presentation of clinical aspects; two practical points brought out are the following:

1. In the treatment of pure colon bacillus urinary infection drugs should first be given which make the urine alkaline. This procedure, especially in children, often causes subsidence of symptoms, without killing the bacilli. The result is probably due to neutralization of acid toxins. After the acute symptoms have subsided, the urine should be made strongly acid by acid sodium phosphate (NaH_2PO_4) and urotropin given in full doses.

2. The Rimini-Burnam test should be used in every case that is treated by urotropin or other formaldehyde producing drug. The test is as follows:

The following three solutions are used: (2) Phenylhydrazine hydrochloride, .5%; (b) sodium nitroprusside, 5%; (c) sodium hydroxide, saturated solution.

Three drops of each of the first two solutions are added to the urine, and a few drops of the sodium hydrate solution poured along the side of the test tube. If formaldehyde is present, a deep greenish-black color passes down through the urine and clouds the fluid. This rapidly changes to green and fades through bright green to orange and pale yellow. This test will detect formaldehyde in urine in a dilution of 1 in 150,000. In solutions of 1 in 20,000 or over, the first color is an intense dark blue, changing to green, etc. The urine and sodium hydrate solutions should be warmed to slightly above body temperature.

If the test for formaldehyde is negative, add a few drops of sulphuric acid to a fresh specimen of urine and boil. Any urotropin present is thereby transformed into formaldehyde, which may be detected as above.

An Epidemic of Specific Parotitis in School Children.—Graham (The British Journal of Children's Diseases) from a study of this epidemic draws the following conclusions:

1. An epidemic of mumps presents all the features os an epidemic of any of the infectious fevers.

2. Malignant cases may occur (Gordon's cases), as in scarlatina, at the end of the epidemic.

3. Members of the same family should attend the same school.

4. Children should attend the schools in their own districts.

5. The control of an epidemic by closing a school or part of a school will become increasingly difficult owing to children's visits to cinemas.

6. So soon as any suspicion of an epidemic or even the presence of an infectious disease presents itself to the teacher, the

school medical service should at once be put in operation to control its progress, and limit if possible the severity of individual attacks by appropriate hygienic advice.

7. No epidemic of a supposed mild disease should be looked on lightly.

8. Every means possible should be taken to avoid the absence of children from school, and the principal weapon in this direction is the school medical service.

Influenzal Meningitis.—Ross and Moore (British Medical Journal) report a case of influenzal meningitis and call attention to the fact that as regards diagnosis of this condition there has been nothing quoted as yet which can enable the observer to differentiate it from the post basic type of meningitis. Occasionally there is a wild delirium, but this is by no means common. In the case noted by the authors the sudden "fitting" with rapid transition to rigidity was striking and perhaps important clinically, since one of the cases noted by Batton began in the same way. The prognosis is very bad, and is certainly more severe the younger the patient. For some time the youngest recovery recorded was that of Sanger's case, a boy aged nine years, but more recently Batton has reported the case of a cuild fourteen months old, who was improving long after the acute stage had passed off. This shows that even at the earliest age an absolutely fatal prognosis should not be given. The cases that survive are so few that ultimate prognosis is very difficult. In Batten's case there had been blindness, which was gradually passing off, when his paper was published. A patient of Sayse was ill six months, and developed a flaccid paralysis, while Mya, in 1902 had a case which recovered, but was left with a hemiplegia. Treatment has little effect upon the disease, vaccines have offered little that was encouraging. Batten's case, which made a recovery, was given 10 grains of urotropin every four hours.

Treatment of Burns by the Application of Alcohol—Milligan in The Australian Med. Jour., has described a method of treating burns which he has found more satisfactory than the current methods. In burns of the second, third, and fourth degree, cleansing with antiseptic lotions is usually recommended. The moisture causes the sloughs to become septic—in other words, converts dry into moist gangrene. Frequent and painful dressings are then necessary. Milligan excludes water from the treatment, and applies alcohol. He thus prevents moist gangrene and inflammation and saves much suffering. A child, instead of spending several months in a hospital, can soon have the burn grafted and run about. The details of the method are as follows: If the patient is in such a state of shock that he cannot stand an anesthetic, a watery saturated solution of picric acid is applied on lint and a protective is put over this to prevent evaporation. On the next day the protective is lifted and more of the solution is poured over the lint, which is nt changed. On the third day the patient is not changed. On the third day the patient an anesthetic. If the picric acid be continued any longer the burn will become offensive. Dr. Milligan has not found the picric acid treatment of burns satisfactory, and simply uses it in the absence of anything better for a patient in a condition of shock. Moreover, the acid is absorbed and may cause toxic symptoms. If the patient is in a condition to allow the administration of an anesthetic he is given chloroform, and the burns are cleansed with sterile gauze wrung out of 70 per cent. alcohol. The whole surface of the burn and the surrounding skin is rubbed vigorously. Blisters are rubbed off with all dead tissue. No blister is pricked, nor is the dead skin allowed to remain to keep fluid pent up only to be infected by the organisms of the skin. Dead tissue is more effectively and easily rubbed off than removed with scissors and forceps. After thorough cleansing a dressing of sterile gauze wrung out of the alcohol is applied. Over this dry gauze and wool are applied, and then a bandage. Under chloroform the same process is repeated daily. Every other day will not do, for the burns begin to be septic and offensive. The parts are rubbed, not wiped, with gauze wrung out of alcohol. On beginning to remove the dressing it will be found stuck to the surface. By pulling upon it bits of dead tissue are satisfactorily removed. The dressings are continued for about eight days, when burns which have not destroyed the whole thickness of the skin will be found in such a clean state that boroglyceride gauze or gutta-percha tissue can be applied as a dressing without pain. It is striking how rapidly the burns now heal under the boroglyceride. If they become infected again, one cleansing with alcohol, followed by one alcohol dressing will render them again aseptic. Burns which involve the whole thickness of the skin take longer on account of the sloughs. Under the alcohol treatment these become black, dry, and shriveled up, and can be torn off or dissected with a sharp scalpel and forceps. Valuable time will be lost if the surgeon waits for the sloughs to separate. The best results follow the cutting off of the sloughs, for they are not sodden, and the surface is

asceptic. A scalpel must be used, for it leaves a clean cut, with no track of dead and injured cells as a scissors does. Dr. Milligan has employed this treatment during five months for a great number of burns in the Children's Hospital, Melbourne. One case of extensive and deep burns was fatal. Two large duodenal ulcers were found at the necropsy, but at the time of death (twelfth day) the burns were in an asceptic state, with all the sloughs removed. In all the other cases healing was most satisfactory. They included burns and scalds of almost all parts of the body, some deep, some on the face, and some on the buttocks, where cleanliness is difficult to maintain in young children. The daily use of chloroform did not prove in any way injurious. There was never any vomiting to interfere with the taking of food, so necessary for a burnt child. Anesthesia must be employed, otherwise the application of alcohol would be too painful. When the children recover from the anesthetic they feel no pain, and are quite happy.

Treatment of Furunculosis.—A Maute, (Presse Medicale), condemns incision of furuncles, as it does not hasten resolution of the lesion and merely adds the pain of the operation to that already present. When a point of fluctuation appears in the centre of the boil, puncture of this spot with a fine galvanocautery needle will give the same results as wide incision. Even carbuncles, provided they are circumscribed, may be cured without incision by immediate use of staphylococcic vaccine in small doses. In dressing a furuncle the author uses a poultice in preference to any other device. The poultice should be small so that it will not cover any healthy skin and transfer the infection to its follicles, and should be kept in position merely by two or three small strips of zinc oxide plaster. As soon as suppuration has ceased, all dressings should be discarded. Where the furuncle has not been completely evacuated, remaining hard and inflamed for some time, it may be covered for a day or two with an ointment of colloidal silver. This is generally rendered unnecessary when vaccine is administered, free and rapid suppuration then taking place.

In a few cases of large, sluggish furuncles Bier cupping has seemed to the author of benefit. In confluent furunculosis of, e. g., the back, neck, forearm, or lower limbs, it is essential not to apply large occlusive dressings to entire regions of the body; each lesion should be separately covered. As for measures to protect uninvolved areas from infection, the author uses camphorated alcohol ether, or carbon tetrachloride containing one or two per cent. of iodine. After this has been applied and the skin has become quite dry, talcum powder should be dusted over the skin. Full baths, even antiseptic, should be omitted for a week or so after the last furuncle has healed, as they soften the epidermis and thereby favor the entrance of germs. In confluent furunculosis of regional distribution the author has had good results from having the patient make a sachet of trioxymethylene, of such size and shape that it can be applied directly to the region involved. The heat of the body liberates formaldehyde from this compound, and usually in a single day the skin is thus rendered sterile. The sachet should not be applied to actually suppurating areas, as moisture renders it irritating. It should be covered with impervious material. This measure is well borne, though causing in some persons a mild sensation of burning.

Case of Osteogenesis Imperfecta, Illustrating High Fever after a Fracture in Which the Fragments Were Not Displaced.—F. J. Poynton reports the case of a girl aged eleven years who was admitted to University College Hospital suffering from fractured left tibia and fibula. The girl had been admitted three times to this hospital and many times to the Great Ormond Street Hospital suffering from fractures of the legs. It took a very slight blow to break them, and this time the fracture was caused by a blow from the fist of a child. Her bones had been soft and easily broken from birth, and she had never been able to walk alone. The case is reported to illustrate the fever that may occur with the occurrence of a fracture not sufficient to disturb the fragments. In this case the temperature rose to 103 deg. F. and kept up, with general malaise, for nearly a week. —Proceedings of the Royal Society of Medicine.

The Diagnosis of Extra Uterine Pregnancy.—Andrews in the Medical Press, London, says that the diagnosis is sometimes extremely easy, at other times difficult. If the history and the physical signs both suggest extra-uterine pregnancy, the diagnosis as a rule is simple, but in many cases one is given only a history of rather irregular menstruation, and the physical signs may be obscure on account of pain and tenderness. Take first the diagnosis when the embryo is alive. Although the uterus is definitely enlarged and the cervix is soft and bluish, the size of the uterus does not correspond with the date of the pregnancy. Hegar's sign cannot be obtained, and the uterus fels firmer and more re-

sistant, less elastic than in intra-uterine pregnancy. At one or other side of the uterus, or at one side and behind, is found a rounded swelling, rather soft and sometimes tender. If watched this swelling will be found to increase in size rapidly—a sign which is of great importance in the diagnosis between living extra-uterine pregnancy and a tubal mole. Most cases are not seen until a tubal mole has been formed, i. e., bleeding has occurred into the ovum, and has converted it into a blood-mole, such as is seen sometimes in the uterus, bringing the pregnancy to an end. In these cases there is nearly always a dark, bloody discharge from the uterus, sometimes accompanied by the passage of decidua. As a rule consideration of the time which has elapsed since the last normal period will show that neither the uterus nor the swelling at the side of it is large enough to contain a living ovum of the size that would be expected.

Cases with Severe Internal Hemorrhage.—When severe internal hemorrhage has occurred as the result of rupture of the tube, or of tubal abortion, the diagnosis as a rule is easy. The patient has evidently had some severe intra-abdominal accident which has caused severe pain, fainting or collapse, followed by distension of the abdomen, and in many cases, by vomiting. She is blanched, the pulse is small and very rapid—120 to 140. The whole abdomen is usually distended to a greater or less degree and hypersensitive. It may be specially sensitive on the side on which the pregnant tube lies, but a characteristic point is that there is universal hypersensitiveness. If the patient is seen soon after the hemorrhage takes place, there will probably be nothing to be made out by examination of the abdomen, except that the skin is white, the abdomen, without being tense, is somewhat distended, and is hypersensitive—no lump will be felt. On vaginal examination a little dark blood will generally be seen coming away, and it may be possible to say that the uterus is enlarged, and that there is a feeling of fullness in Douglas' pouch, without any lump or any tension.

The most common mistakes made in these cases of severe internal hemorrhage are diagnosing perforation of the appendix, or of a gastric duodenal ulcer, or twisting of an ovarian tumor. The physical signs may be much alike. There is, however, no evidence of severe hemrrhage, and even if there has been no period of amenorrhea to point to a correct diagnosis, the slight loss of blood from the uterus ought, as a rule, to suggest it. It is rare to be felt on a careful bimanual examination.

Pelvic Hematocele.—If the intraperitoneal hemorrhage has not been fatal, and the patient has not been operated upon, a pelvic hematocele is formed. The blood gravitates into Douglas' pouch, and forms a mass of clot filling the pelvis, and, if sufficiently large, rising up into the abdomen. It is roofed over by adherent coils of intestine, while anteriorly it is in contact with the uterus, broad ligaments, bladder and lower part of the anterior abdominal wall. In some cases the blood occupies the space between the uterus and the bladder, but it usually pushes the uterus upwards and forwards. Abdominal examination shows a tender, fixed swelling, the upper part of which, at any rate, is resonant on light percussion. On vaginal examination the cervix is often high up, sometimes out of reach; Douglas' pouch is occupied by a tense swelling which may bulge downwards to a considerable extent. Fluctuation may sometimes be obtained between the fingers in the posterior fornix, and, the other hand on the lower abdomen. Later, when absorption of the blood has begun, the contents of Douglas' pouch may have a characteristic lumpy, irregular feel. It is common to find the temperature raised a degree or two in cases of pelvic hematocele. As a rule these physical signs, with the history of anemia, and the brownish discharge from the uterus, makes the diagnosis certain.

Differential Diagnosis.—Probably the most common error is mistaking extra-uterine pregnancy for threatened or incomplete miscarriage. It must be remembered that uterine bleeding in extra-uterine pregnancy is seldom, if ever, severe, and conversely pain is not a marked symptom in threatened miscarriage. Bleeding in early pregnancy must never be attributed to a threatened miscarriage until a careful bimanual examination has been made.

The condition which sometimes causes a difficulty in diagnosis is the association of ovarian cyst with normal pregnancy. If bimanual examination is easy, the elasticity and globular shape of the uterus and the presence of Hegar's sign will show that the pregnancy is intra-uterine. Simultaneous intra- and extra-uterine pregancy is not common.

Inflammation of the appendages giving rise to irregular bleeding and pelvic pain may be mistaken for tubal pregnancy. A careful history will sometimes clear up the mistake. There are no signs of pregnancy; the body of the uterus is not enlarged; the cervix is not softened. However, as the mistake is likely to be made only when the presence of a mole in the tube is suspected, possibly some weeks after the death of the ovum, the uterus may not be much en-

larged, and with a rigid abdominal wall it is difficult to make out its exact size. In some of these cases which do not come to operation, it must remain doubtful whether there is tubal pregnancy or tubal inflammation.

Tubal Rupture and Abortion.—In the formation of the placenta in the tube the young chorionic villi burrow deeply into the tubal muscle, and may reach the peritoneal covering. If they destroy the peritoneal coat, tubal rupture has occurred. In most cases the term "perforation" would better describe the condition. Two or three points may be seen on the tube where the peritoneum has been destroyed, and the rupture has been sealed by a little patch of fibrin. These are spoken of as "concealed ruptures." It must be remembered, however, that there is an intervillous space filled with blood which has poured out of maternal vessels, destroyed by the trophoblast, in the formation of the placenta. If this intervillous space communicates with a perforation of the peritoneal coat, blood will escape into the peritoneal cavity. In another form of rupture a large blood vessel is destroyed by the trophoblast. A rush of blood may break through one of the weak spots described as "concealed ruptures," so that the artery bleeds straight into the peritoneal cavity. It is not very uncommon, when operating, to find blood spurting out of a hole of the tube wall.

By the term "tubal abortion" is meant that bleeding occurs into the lumen of the tube. The ovum is not really inside the lumen of the tube. The ovum is not really inside the lumen of the tube. Just as in intra-uterine pregnancy there is a decidual cavity present up to about the end of the third month, so in tubal pregnancy the tubal lumen remains, although it is distorted by the ovum which is bulging into it from one side, but that aspect of the ovum is covered by tubal mucous membrane, with a certain amount of muscle. Perforation of this also may take place in just the same way as the perforation of the peritoneal coat and bleeding may occur into the lumen of the tube (tubal abortion). If the abdominal ostium of the tube is open, blood will run out into the peritoneal cavity, and will produce the same symptoms as if tubal rupture had occurred. Sometimes there is a history pointing to repeated slight attacks of intraperitoneal bleeding. In such cases a diagnosis of tubal abortion with the ovum remaining *in situ* can usually be made with more or less certainty. In some cases the ovum itself becomes loosened and is expelled from the abdominal ostium into the peritoneal cavity with more or less bleeding—(*complete* tubal abortion). If, on the other hand, the abdominal ostium is closed by adhesions, blood will collect inside the tube. The fact that tubal abortion has occurred into a closed tube or that a mole has been formed does not preclude the possibility of tubal rupture. The destructive action of the trophoblast is the essential factor in rupture of the tube, but in some cases there is distinct evidence of some increase of pressure being responsible for the actual rupture. Bimanual examination, some effort made by the patient, vomiting, or straining, has been followed by sudden pain and collapse, the tube having given away at a weak spot. The tube is sometimes found so thin in places as to be translucent.

A Case of Myxo-Sarcoma of the Lung Involving the Heart.—Jamieson, in the (Australasian Medical Gazette).

Clinical Notes of the Case.

T. C., aged 33 years, farm laborer. *Family History.*—Two aunts on the mother's side died of phthisis. *Previous History.*—Has always been exceptionally strong, being a good athlete, and temperate in his habits. For the past two years, however, he has suffered from shortness of breath on exertion, and has had a cough with free expectoration, so that it was thought he might have "consumption." About May 1st he caught a cold, but continued his work ploughing, till on the 17th he had a shivering fit, and began to spit blood. He went to bed, and then left for his home, arriving three days later.

On May 23rd I was called to see this patient. He was lying on his right side, and complained of great pain in both right and left shoulders, and in the upper part of the left chest. He was exceedingly restless. The temperature was 103 deg., the pulse uncountable and intermittent. Respirations were about 40, with marked dyspnoea, cough and blood-stained expectoration. The apex of the left lung was very dull, with bronchial breathing, and there were moist sounds over the whole left lung. The heart apex was not located, and the heart sounds could not be differentiated. The pulse corresponded with the heart's action. The liver appeared to be tender and enlarged downwards. There was no oedema of the legs, and the urine was free from albumen.

May 26th.—The temperature was subnormal. There was marked dyspnoea with cyanosis, and the pulse was uncountable.

May 30th.—The condition was much the same, but he could not lie on the left side, and was now complaining of severe pain in the upper part of the abdomen and in the groins. The liver appeared to be larger. An aspirating needle was inserted, but no fluid

withdrawn.

June 4th.—Condition much the same. Still complaining of abdominal pain and marked dyspnoea.

June 6th.—The patient was sent to the Corowa Hospital. On arrival at the hospital at 12.30 p. m., he was in a state of collapse. Temperature 77 deg., pulse 96, respirations 34, with marked cyanosis and dyspnoea. The patient could only lie on the left side, and was very restless. He complained of severe pain in the epigastrium. Owing to his condition, a proper physical examination could not be made. His condition gradually became worse, and death took place the same day at 5.45 p. m.

A post-mortem examination was held sixteen hours after death. The body was well nourished and muscular. Post-mortem lividity marked. On opening the right side of the chest, air escaped, with a little strawcoloured fluid. The right lung was partially collapsed. The pericardium was found to be distended and full of blood. The heart and left lung were adherent, and were removed *en masse*, and as a number of what looked like small cysts appeared to be attached to the muscle wall, the specimen was forwarded to Sydney for examination. The liver showed chronic venous congestion with a milky patch on its surface. The kidneys were both much enlarged, but the capsules stripped readily. The other abdominal organs appeared to be normal. A hard nodular mass about the size of a walnut was noticed near the left shoulder.

Pathological Report.

Examination of Material Submitted to the Government Bureau of Microbiology, Sydney.—The material submitted consisted of the left lung and heart attached to each other. The lower lobe of the left lung was occupied almost entirely by a dull-yellow, semi-gelatinous new growth, in parts considerably stained with blood. The new growth in the older parts of the tumour could be almost shelled out from the surrounding tissues, sometimes in large masses as big as the fist. This left behind a rather thin adherent laver, representing the newer and invading portion. In other parts of the lung the condition was more infiltrative, the whole of the pulmonary tissue being apparently replaced by a semi-gelatinous substance. Projecting forward between the heart and the lung was a peduneulated mass of new growth of similar structure, attached by a narrow peduncle to the tissues connecting the heart to the lung. This growth was about the size of the closed fist. The auricular portions of the heart were surrounded by masses of a similar dull-yellow, gelatinous growth, which seemed to surround, as a thin layer, nearly all the external surface of this organ, being in places almost a quarter of an inch thick, and in others very thin.

Sections were made of various parts of the new growth. In the larger and hemorrhagic areas the tissues presented a myxosarcomatous appearance, consisting of large cells with irregular branching processes embedded in a loose stroma. In places the cells were few and far between, but in others they were more congregated together and more elongated. This part was traversed by large vascular spaces filled with blood, from which apparently haemorrhages had occurred. These spaces were lined by scattered, flattened cells. In the more actively growing parts of the tumour the tissue consisted essentially of very large cells, with very large nuclei. The cells were often elongated, and were embedded in a more or less fibrous stroma. There were scattered very large cells, with two or more nuclei, occasionally even as many as eight or ten. These cells were evidently those in which nuclear division had proceeded at a greater pace than cell division, and differed from the type found in myeloid sarcoma. A section through the thickened serous covering of the ventricle showed a thickened layer of fat, whose surface was infiltrated with large irregular cells, apparently sarcomatous ones, associated with plasma and round cells (chronic inflammatory reaction). The new growth is a large-celled sarcoma showing considerable areas of myxomatous degeneration.

The Pancreatic Secretion.—An interesting question has been raised by Schlagintweit and Stepp (Munchen. med. Woch.) as to the effect of achylia gastrica on the pancreatic secretion. As is well known, the secretion of pancreatic juice is provoked by a chemical reflex, namely, by the formation of secretin, and its conduction to the pancreas by way of the blood stream. But as secretin is evolved from the duodenal mucosa by the action of the acid gastric juice, the authors imagined that possibly where the latter was inactive or absent some deficiency in pancreatic secretion might secondarily occur. They therefore devised two series of experiments to test this view. First, they obtained specimens of gastric juice from normal persons and from those suffering from carcinoma of the stomach and from achylia. These they mixed with extract from the duodenal mucosa, and injected intravenously into dogs. They found that normal and most carcinomatous persons gave a juice which produced secretin, and caused a flow of pancreatic secretion,

but that in achylia the results were negative. They then successfully operated on a healthy bitch, in order to produce a duodenal and pancreatic fistula. The animal remained in normal health after the operation. Into the duodenal fistula they injected gastric juice from normal persons, from those with superacidity and subacidity, from those with undoubted carcinoma, and also salt solutions of various strengths. The injections were always made when the animal's stomach was empty, slowly and under low pressure, and due note was taken of any instances when the animal's own gastric juice escaped into the duodenum. As a result of many observations, they found that the injection of anacid gastric juice either from cases of carcinoma or from cases of achylia only produced a minimal pancreatic secretion.

This result is opposed to the commonly accepted view that when gastric digestion is eliminated the pancreas takes on a compensatory over action. The authors discuss possible criticisms of their findings; it may be urged that in diseased persons the pancreas is activated (i.e., secretin is formed) apart from the action of the gastric juice, and that it is impossible to apply the results obtained from dogs to the human subject until a condition analogous to achylia gastrica has been proved to occur in these animals. Still, they are of opinion that considerable importance attaches to their experiments, especially as there are no systematic observations of the trypsin secretion in cases of achylia. Von Noorden has indeed shown that the absorption of food is not disturbed in achylia, but on the other hand cases have been observed where achylia gastrica was accompanied by absence of pancreatic secretion. They are inclined to think that there may be other substances, such as oils, which excite pancreatic secretion by a nervous reflex, and that soaps formed in the intestine may produce duodenal secretin. For these they quote some experimental evidence, and also mention some recent researches which show that a rhythmic and automatic flow of pancreatic juice may occur. They express no opinion as to the question of psychic influence on pancreatic secretion, but conclude that at any rate it is the result of several different causative factors, and when the less important ones are in abeyance the absence of acid gastric juice leads to severe pancreatic insufficiency (pancreatic achylia).

The effect of the absence of bile from the intestine has been studied in a child aged ten weeks, suffering from congenital absence of the bile-ducts. The pancreatic duct was normal, and the only defficiency concerned the splitting up and absorption of fats. Nitrogen metabolism was unaffected, and the pancreatic secretion active. Hoflich has shown in twelve cases that severe disease of the gall-bladder and cholecystectomy fails to influence the secretion of gastric juice, so that presumably the pancreatic secretion is also unaffected.

Congenital Chondrodystrophy—Wagner (Arch. f. Gynak.) publishes a report on a case of this kind in which a direct inheritance from mother to child could be demonstrated. The mother was under clinical observation since her tenth year and presented well-marked clinical evidences of chondrodystrophy including excessive muscular development, regular dentition in contrast to rickets, characteristic brachycephalic shape of the head, short extremities without bowing and enlargement of the hypophysis with normal or prematurely ossified centers, short thick diaphysis and a normal length of the trunk. The pelvis was that of the type described by Breus and Kolisko. The disease is generally transmitted to the father, although in this instance the mother was affected. He says that the condition is due to two causes, either we are dealing with an inhibition of the normal bone formation as the result of disturbances in the endocranial glands, especially the primitive genital glands, or a muscular interference of the growth of the long bones results from excessive muscular effort which is brought about by hypertrophied development of the musculature as the result of a hyperfunction of the genital glands.

Ovulation, Corpus Luteum and Menstruation.—Ruge (Arch. f. Gynak.) reports his observations in a series of 106 cases in which the uterus and adnexa were rsmoved. He finds that ovulation and the formation of the corpus luteum stand in a well-marked close association with the cyclic changes in the uterine mucosa. The rupture of a follicle and the beginning of the development of the corpus luteum take place during the first fourteen days counting from the beginning of menstruation. The stage of vascularization is combined with the premenstrual changes in the uterine mucosa. The full development of the corpus luteum extends to the beginning of menstruation. The retrogressive changes in the same usually start with the beginning of menstruation and are closely connected with the interval stage to the mucous membrane of the uterus. Full development of the corpus luteum and freshly ruptured follicles were not observed in any case and one apparently excludes the other.

The Experimental Production of Pernicious Anaemia in Rabbits.—Adler (Journal of Medical Research) as the result of the researches of Faust and Tallquist into the hæmolytic substance in the head of Bothriocephalus latus, which they found to be oleic acid, has carried out some feeding experiments on rabbits. He found that fat in the form of olive oil or cotton-seed oil was toxic to these animals, this effect depending on the content of unsaturated fatty acid. Blood crises were produced resembling those of pernicious anæmia, together with extreme emaciation. The anæmia was apparently due to a destruction of red cells in the blood vessels of the abdominal organs rather than to a direct effect upon the bone-marrow. In fact, this destruction seemed to stimulate the bone-marrow, so that high blood counts were met with. Long continued feeding with non-toxic doses of quinine protected rabbits against the fat intoxication.

Roentgen Rays in Skin Diseases.—Dore (British Medical Journal) says that properly applied, x-ray treatment is of undoubted service in dermatology. The pastille of Sabouraud and Noire affords a useful means for measuring an exact dose of x-rays, and is now commonly employed as a standard of measurement in this country. He finds that in psoriasis the x-ray treatment is most suitable for obstinate localized patches, and these rarely fail to respond to three or four half-pastille doses, repeated at intervals of a week. Repeated small doses seem to give better results than full pastille doses. Inflammatory reaction is unnecessary and harmful. In chronic eczema x-rays are often successful where other measures have failed. Here again half-pastille doses are best. Cases of lichen simplex and chronic lichen planus, including the hypertrophic variety, can be relieved by x-rays in pastille doses. The other affections discussed by the author in relation to this treatment include acne vulgaris, coccogenic sycosis, keloid, alopecia areata, etc. X-ray treatment is mainly symptomatic, and temporary success is often followed by recurrence of the disease, but beneficial results can be obtained in a large number of chronic cutaneous affections which are refractory to other methods of treatment.

Case of an Unusually Large Tumour of The Child Complicating Delivery.—Follit, in The Australian Medical Gazette, mentions this case. The midwife in Attendance had made repeated futile efforts at delivery, and sent for my assistance. I found the child's head and shoulders born, and was informed that no further advance could be obtained. By vaginal examination the lower limbs could be felt in their entirety, and between and behind them was a tumour, whose size could not be defined by the examining finger. I decided to make a further effort at traction, and if that failed to puncture the tumour with a trocar in the hope of reducing its bulk. The condition of the mother was fairly good, and the cord still pulsated feebly.

Delivery was effected after strong traction; the cord was immediately tied, and the placenta followed within five minutes; there was a fair amount of haemorrhage, which, however, was controlled by the usual measures. The child was apparently healthy, and was as active and cried as lustily as any new-born infant of small size. The tumour was fixed to the sacrum, and was of such a size that in the course of growth it had lifted the skin off the sacrum behind, the buttocks laterally, and the perinaeum below, so that the anus and vulva pointed directly forwards, and the thighs were spread-eagled at right angles to the body. The tumour had been considerably damaged during delivery. It showed a smooth embossed surface, and was of tough and semi-elastic consistency. It appeared to be a cystic fibroma and removable. An operation was therefore decided upon.

An Operation on Day After Birth.—The skin over the convexity and sides of the tumour was badly damaged, in parts already sloughing, so that in order to obtain healthy wound edges the incision had to be carried within half an inch of the anus in front, and practically to the junction of the tumour with the skin of the back behind. A good deal of haemorrhage was met with, but as it came from the tumour, no attempt was made to control it beyond sponging. The pedicle was defined, and fund to consist of strands of very tough fibrous tissue, which were cut through piecemeal; absolutely no haemorrhage came from the proximal ends. After removal of the tumour an oval space was left, about 1½ inches wide at the centre. The wound was closed with silk-worm gut, except in the centre, where four strong silk sutures were used in order to bring the anus back into its natural position, and to try to keep it there. The child did uncommonly well, except that on the third day the silk sutures all cut through owing to the vigorous movements of the child. The wound became septic, but in spite of this healed and contracted rapidly, and although an ugly scar was left, the skin remained supple, and no limitation of function resulted.

The tumour proved to be a hard fibroma in a state of advanced cystic degeneration.

The child with the tumour weighed 7 lbs.; the child alone 4¼ lbs.

The Treatment of Diabetes With Rectal Injections of Sugar Solutions.—Luthje (Therapie der Gegenwart) reports good results from the administration of glucose solution to diabetics by rectal injection by the drop method. The Dr. says that the sugar is much better absorbed and utilized by diabetics when given in this way than when given by mouth. The writer has had especially good results in the treatment of acidosis by this plan. By the drop method most persons can absorb from the rectum from one to two liters of fluid a day. He uses a 5.4 per cent. glucose solution, and hence the amount of sugar absorbed would be from 50 to 100 grams a day.

Pathology and Therapy of Renal Calculus.—(Medizinische Klinik) says that on account of the limited information relative to metabolism, it is the belief of W. Karo that we are still unacquainted with the foodstuffs causing a precipitation of oxalates, phosphates, xanthin and cystin, all of which tend to the formation of calculi. Rosenbach has, by animal experimentation, demonstrated that a healthy kidney is able to rid itself of concretions. The acue phenomena of calculi call for symptomatic treatment. Heat, moist or dry, applied to the renal regions affords great relief. Massage may alter the position of the stone and, thus, afford relief. If the pain is extremely severe or the colic unduly prolonged, morphin, in combination with heroin and pyramidon, must be used. Copious draughts of tea and milk, and any of the mineral waters suited to the character of the stone, are advised. To lessen the possibilities of traumatic infection following the passage of the calculi, an internal urinary antiseptic is always recommended. Recurrence of the attack is best avoided by a rigid diet—one bearing a definite relationship to the nature of the concretion. The urine should be kept neutral. While the diet should be mixed, care must be taken to exclude meat, thyme, caviar, liver and kidney. Feed generously of vegetables and fruits.

Pathology of the Adrenals.—(Munchener Medizinische Wochenschrift) Helly calls attention to a case in which an adrenal tumor served as the only possible explanation for sudden death. In reporting his case, Helly cites the recently-published case of Kolisko, in which sudden death followed the extraction of a tooth. Helly's case was that of a female, in the early fifties, suffering from a cardiac hypertension, increased blood pressure and glycosuria. This combination of symptoms was, in the opinion of the author, directly attributable to the adrenal tumor. The tumor, which was made up principally of chromaffin elements, caused increased functioning of the adrenal, thereby causing an excess of epinephrin to be thrown into the circulation. This excess of ephinephrin damaged the heart to such an extent that the patient was unable to withstand the mild shock of minor surgical procedure. Whilst it is almost a matter of impossibility to detect any excess of epinephrin and the lowering of vital resistance with which it is attended, the finding of such tumors might offer a reasonable explanation for cases of sudden death in apparently well persons.

Mistakes in Diagnosis of Juxta-Pyloric and Duodenal Ulcer.—Kempt (Ugeskrift for Laeger) reviews thirty-seven operative cases of juxta-pyloric ulcer in stomach and duodenum, and four of cancer. He says that recent investigations concerning the diagnosis of duodenal ulcer are erroneous; the syndrone commonly ascribed to duodenal ulcer really belongs to juxta-pyloric ulcer, regardless of whether the ulcer extends down into the duodenum or up into the stomach. Periodicity of the disturbances is of no diagnostic import, as it may occur with other gastric affections. The condition of gastric ulcer may be reasonably presumed when either of the following combination of circumstances exist: (1) Periodical tardy pains (vomiting), increased gastric secretion, occult blood; (2) periodical tardy pains (vomiting), hypersecretion and small retention after twelve hours; (3) periodical tardy pains (vomiting, hypersecretion and pyloric spasm; (4) hypersecretion, occult bleeding and small twelve-hour retention; (5) hypersecretion, motor insufficiency and small twelve-hour retention; (6) hypersecretion, pyloric spasm and small twelve-hour retention; or (7) pyloric spasm or occult bleeding. In ulcer, soon as the stomach is emptied, the pyloric spasm is relaxed and pain ceases, while in cholelithiasis the pyloric spasm is a negligible factor in the general contractions. The site of the ulcer should be definitely determined in order that the surgical interference be intelligent.

Treatment of Acute Abdominal Cases in Children.—Mummery (British Journal of Children's Diseases) says that the common acute abdominal conditions in children are: (1) Intussusception; (2) acute appendicitis; (3) acute obstruction. Intussusception usually occurs in well-nourished children, is always very sudden in onset, and most generally can be diagnosed by the

apple-jelly stools. The operation should be carried out forthwith and be carried through rapidly. Children should not, after operation, be kept on starvation diet, nor should they be restrained from moving about in bed. Mummery has not met with appendicitis under five years of age; it is, however, not so rare in infants as he believes. There is, in his opinion, nothing to justify delay in operation. "The important factors in performing the operation are: to be as rapid as possible, to handle the intestine very lightly, and to get the child back to bed as soon as possible." After operation he adopts the Fowler position, has a belief in the value of small doses of brandy (preferably by enema) and has found the hypodermic injection of pituitary extract most useful by causing peristalsis of the bowel and increasing the blood pressure.

Absence of Corpus Callosum.—Stoecker (Arch F. Psychiatrie) says that defect of the corpus callosum has often been described, but Stoecker considers that a detailed description of another case would be of value, particularly since he is able to offer a thorough going anatomical description on the basis of a series of brain sections. Few of the cases hitherto reported have been accompanied by such anatomical demonstration. The writer's case was that of an 18 year old juvenile paretic. Among other points of interest, it was found that the fornix did not unite in the middle line as is usually the case, but remained separate; that aseptum pellucidum did not exist; taht an anterior commissure was definitely present and apparently normal; that the convolutions and fissures on the mesial surface, as ell as on the convexity, showed certain changes from the normal, in which the anatomical findings were similar to those in previously described cases. Certain interesting deductions are drawn regarding the course of the fibres in the corpus callosum and the adjoining hemispheres.

The Treatment of Neuritis With Strychnine.—At the meeting of the Medico-Surgical Society of Modena, April 25, 1913, T. Sylvestri reported four cases of neuritis treated with strychnine; one was a case of bilateral sciatic neuritis; one of left sciatic neuritis; one of general poliomyelitis with a polyneuritic form; one of a serious polyneuritis. He treated all these cases with strychnine nitrate, either per os or by hypodermic injection, with rather generous doses, but not so high as Hartenberg employs. In adults the initial dose was one milligram, increased every day by one milligram, up to eight or nine milligrams; such a dose was kept up for seven or eight days and then diminished at the same rate. After four or five days the medication was given again. In a child thirty months old with poliomyelitis of a polyneuritic form he gave strychnine nitrate per os, commencing with one-fourth milligram and gradually increasing the dose to three-fourth milligram pro die. In each case the results were absolutely miraculous, especially in two of the cases which had been pronounced incurable. The third case was a very serious one, so much so that repeated injections of morphine could not deaden the pain; the fourth case had been pronounced a grave poliomyelitis and consequently had been considered incurable.—La. Riforma Medica, Naples.

Medication Through a Tracheal Fistula.—Rosenthal (Archiv. Gen. de Med.) says that intratracheal medication, as hitherto practiced, is attended by a number of difficulties. If the injection is through the larynx, the latter must be anesthetized and the laryngeal cannula manipulated daily by a skilled laryngologist. This manipulation, moreover, is nearly impossible in very feeble or very young patients. If the medicament is injected directly into the trachea by means of a syringe armed with a long needle, the point of the latter is very apt to injure the posterior wall of the trachea, and any restlessness on the part of the patient is apt to prove decidedly embarrassing to the operator.

These difficulties, Rosenthal believes, are obviated by his new method. This consists in the use of a very fine cannula, having the shape and size of the ordinary tracheotomy tube, but an external diameter of only 2 to 4 mm. This tube is inserted into the trachea, either by means of a simplified tracheotomy operation or, if preferred, by thrusting the cannula, armed with a trocar, directly through the skin into the lumen of the trachea. The cannula is fastened in place in the usual manner and, when not in use, is kept sealed by a blunt mandrin. It produces no irritation or discomfort and does not interfere with cough or expectoration. The writer advocates the introduction, through the cannula, of large doses of antiseptics (best in olive oil as a vehicle) in nearly all severe pulmonary infections. He uses chiefly gomenol, a French proprietary antiseptic, or thiocol, the indications for these being bronchopneumonia, pulmonary gangrene or abscess and pulmonary tuberculosis. In the last condition, cyanide of gold may be used, and solutions of bile salts in lobar pneumonia.

In the course of his experiments he found that the power of the pulmonary epithelium to absorb liquids, and especially oils, is nearly unlimited; 100 grm. of oil are ab-

sorbed cleanly and rapidly. As this represents some 900 calories, it is not to be despised as food. Cream, albuminous fluids and the like are tolerated equally well. Patients may thus apparently be supported for days at a time by means of intrapulmonic alimentation. In cases of gastro-intestinal ulceration in which it is desired to put this tract completely at rest, pulmonic feeding would seem to be at leats as rational as rectal feeding. Obviously the entire procedure must be conducted with scrupulous asepsis.

The Treatment of Acute Pleuritic Empyema.—Hahn (Deutsch. Med. Wochenschr.) says that the proper treatment of chronic empyema is unquestionably surgical. In acute empyema, opinions differ in this matter. The disadvantages of rib resections are obvious. The operation in children requires a general anesthetic; in adults, with local anesthesia, the shock may be no trifle; the sudden change in intrathoracic pressure may prove fatal; the resulting pneumothorax involves a great additional burden upon the weakned heart. In the Mgdelburg- Sudenburg Hospital, satisfactory results have followed a less radical method. A trocar is thrust through an intercostal space, the mandrin withdrawn and immediately replaced by a Nelaton catheter. The latter is clamped and the metal cannula withdrawn over it, leaving only the catheter in place. The pus is first withdrawn very slowly and the free end of the catheter then kept permanently connected with a flask from which the air iske pt partially exhausted. In this way a constant aspiration is kept up and the lung on the affected side kept distended. The results in 25 cases were very satisfactory, complete healing occurring, on the average, more rapidly than after resection. If the discharge persists for more than six weeks, or if there is reason to infer the presence of a number of encapsulated empyemas, surgical interference is indicated.

The Combined Action of Medicaments in Cardiac and Renal Dropsy.—Strauss (Therap. Monatsbl). Cases of cardiac or renal dropsy, in which digitalis, calomel or diuretin have proved unavailing, often, in the writer's experience, respond to a mixture of a various diuretics and cardiac tonics. He is accustomed to prescribe:

R Inf. e fol. digital. titr	1.0
Bulb, scill	5.0
cum Aq. destillat	150.0
Euphyllin	
Tr. strophanthi aa	2.5
Spartein, sulf.	0.1
Tr. opii simpl.	1.0
Mucilag. gum. arab. ad.	180.0

M. D. S.

Twice daily two tablespoonfuls in an enema.

A New Test for Arteriosclerosis.—Hertzell (Berl. Klin. Wochenschr.) mentions the case of a patient who was made to lie quietly in bed and, by means of pneumatic cuffs such a sare used in sphygmomanometry, the circulation is completely shut off in one arm and both legs. This is invariably followed by a rise in blood-pressure as registered in the free arm. Normally, this rise in arterial pressure is in the neighborhood of 5 mm. Hg. In cases of arteriosclerosis, however, the rise may amount to 60 mm. or more. The explanation of this abnormal rise may be found in the fact that one of the first results of arteriosclerosis is the loss on the part of the arteries of the power to dilate promptly when external causes bring about an increase of the peripheral resistance. The result under these circumstances must be a sharp rise of the blood-pressure. The writer believes that whenever this reaction is positive, we may infer a pathological change in the arteries in the direction of greater rigidity. Such patients should be very carefully handled, especially when we have occasion to use hydro-therapeutic procedures.

Dermatitis Due to Plaster of Paris.—Whitfield (British Jour. Dental Science) says that a dental surgeon consulted the author about an irritable eczema of the hands chiefly confined to the thumb and fingers. On inquiry it was found that the patient had been working a good deal with plaster of Paris, takin gcasts of the mouth. The attacks were always consecutive to the contact with this material, and the disease was easily cured by removing the cause and dressing the hands with suitable applications. The type of eczema was exactly similar to that among workers in cement. The skin wa sonly moderately reddened; there was a considerable breaking up of the horny layer, with a tendency to form fissures where the skin was folded into creases; a few attempts at vesicle formation were seen in the more acute chemical poisonings of the skin such as are produced by biniodide of mercury lotion.

Facial Paralysis Following Neosalvarsan Injection.—Domisse (S. African Med. Record) mentions a patient with early secondary symptoms and markedly positive Wassermann reaction, received an intravenous injection of 0.0 gm. neosalvarsan in 30 minims of redistilled sterilised water. Five minutes after injection a severe rigor took place, lasting for about two hours. Six hours later the left side of the patient's face seemed immovable, and next morning there was a true picture of paralysis of the

seventh nerve, together with loss of sense of taste and herpes labialis. The patient complained also of earache and hyperacusis. These last passed off in a week's time, but the facial condition did not improve until a month later. Large doses of potassium iodide and grey powder caused the condition gradually to improve, until, about four months later, it was practically cured.

Thiosinamin in Keloid and Dupuytren's Contraction.—Tubby (British Med. our) has employed thiosinamin treatment with success in cases of keloid and of Dupuytren's contraction. With a fine tenotomy knife a large number of multiple incisions are made transversely to the bands of keloid material. No attempt is made to arrest haemorrhage except by pressure, and when the bleeding has ceased a solution of thiosinamin is vigorously rubbed in; when the scar tissue is thick, a few drops may be injected into the most prominent bands. He injects 15 minims at a time in children, and 20 minims in adults. In one case (a patient over 60) some cardiac collapse was noted, but in other cases there were no untoward symptoms. The treatment may have to be repeated twice or three times at intervals of fourteen days.

Paralysis Agitans and the Ductless Glands.—Parkinson's disease, the author points out, has been witnessed in association with myxedema, exophthalmic goiter, and scleroderma. Pathologic changes in the thyroid, parathyroids, and pituitary have been detected in this disease, and administration of preparations of these organs at times yields benefit in the same disorder. Paralysis agitans may thus be looked upon as a dystrophy of the internal secretions the result of endogenous intoxication, which, in turn, must react on some particular region of the nervous centers. On the whole, the symptomatology of the disease resolves itself into a single disturbance, viz., exaggerated muscular tone. Since physiologists now locate the center presiding over muscular tonicity in the subthalamic region, at the *locus niger* of Sommering, and at autopsies in cases of Parkinson's disease circumscribed lesions, such as cysts, tuberculomas, and tumors, have been found in this very situation, the author is inclined to accept the view that the endointoxication of paralysis agitans exerts its effects here, just as that of exophthalmic goiter, he says, acts on the restiform bodies. As to the manner in which the intoxication affects the nervous structures, the author points out that thyroparathyroid insufficiency causes loss of calcium from the organism and its deficient assimilation. Calcium is known to be a sedative to the nervous and muscular systems, and there results therefore from the decalcification in paralysis agitans nervous excitation, whence naturally follows increased muscular tone. Studies of the urine in cases of Parkinson's disease by the author, as well as observation of various clinical manifestations, especially those referable to the bones and joints, confirmed the existence of decalcification in this affection. The treatment indicated, therefore, includes both thyroparathyroid organotherapy, and recalcification by the administration of calcium chloride. In cases reported by the author excellent results were thus procured.—Gauthier, in Gazette Medicale de Nantes.

A Case of Salvarsan Poisoning.—Pandalai, in The Indian Medical Gazette, says that the treatment by Salvarsan for various hœmoparasitic diseases is, by no means, in the experimental stage, yet even today it is not rare to meet with cases in which such treatment is boldly persisted in and injurious after-effects directly attributable to it have been produced which are no less serious than the possible effects of the malady itself. It is true that in great many instances, for example, in the treatment of the Secondary and later manifestations of syphilis and of yaws, the immediate result of the intravenous injection of Salvarsan is of such a spectacular nature as to impress one with its specificity, but in very few cases indeed could such a belief be continued for any length of time. I have noticed that in the majority of cases, either repeated and refractory recurrences have followed, dashing to the ground the fervent hopes of the most optimistic experimenter, or such disastrous consequences have resulted which might well make the physician feel something not unlike repentance.

The above general statements apply with equal force to Salvarsan in the treatment of malaria, an instance of which has recently come within my experience. I append a few notes on the case which may be of interest:

Sepoy R. S., æt. 30, of the —— Punjabis, was admitted to hospital in January, 1913, with remittent pyrexia which was suspected to be malaria. Microscopic examination of the blood confirmed this belief and crescents of malignant tertian malarial parasite were discovered in large numbers. Believing in the potency of Salvarsan against all hœmoparasites, including the malarial parasite, the medical officer in attendance injected early in February 0.4 gramme of Salvarsan intravenously. The general reaction which followed this injection was serious and among the symptoms and signs the patient had were the following:—Severe jaundice,

vomiting and enlargement of the liver, rise of temperature to 103 deg. F., anorexia and prostration. In a few days wasting and symptoms of polyneuritis, most marked in the arms and legs, manifested themselves. The patient gradually recovered; the enlargement of the liver subsided, general condition improved, and in from 2 to 3 weeks he had recovered so far as to be able to walk about, but pain and weakness of the legs still lingered, and it was considered desirable to send him home on sick leave for six months.

He returned from leave in September with the following symptoms:—Sensations of pains and needles in both legs, slight wasting of thigh muscles, pain on pressure in the calf muscles, excessive sweating in the palms and soles, partial anæsthesia in the soles and when walking a feeling as if treading on cotton wool, gait unsteady and wavering, pupil reflexes normal and general condition good.

He was kept under tonic treatment for 8 months carefully avoiding arsenic, but very little improvement resulted in the symptoms of peripheral neuritis. He was in due course brought before a medical board and invalided as unfit for further service.

I must not omit to mention that notwithstanding the disastrous sequelæ arising from the treatment adopted, the patient had no further recurrence of his original malarial trouble throughout the three months he was under my observation after his return from leave. This freedom from subsequent attacks of malaria may reasonably be attributed to Salvarsan treatment in the first instance, and it is probable that the malarial parasites in his blood have been entirely eradicated, although it may be said that it is yet too early to confidently make such a statement.

The Use and Abuse of Tuberculin.—Woodhead (British Medical Journal) gives his conclusions as follows:

Under proper conditions the exhibition of tuberculin exerts a favorable influence on the course of tuberculous disease, and stimulates beneficial reaction of the tissues.

Up to the present tuberculin has never conferred complete immunity to tuberculosis, either in man or in animals.

Relative immunity may be produced by the injection of small doses, and the only safe method of administering tuberculin treatment is to avoid all but mineral reactions. Otherwise it may do more harm than good.

Ill success has followed all attempts to treat patients or to immunize with antitoxic serums drawn from animals "immunized" by injections of exotoxins and endotoxins of the tubercle bacillus, because these are unable to immunize against the living tubercle bacillus. Tuberculin contains, besides exotoxins and endotoxins, certain of the proteid elements of the tubercle bacillus. The fact that tuberculin produces effects closely similar to those produced by the living tubercle bacillus renders it at once a powerful ally when rightly used and a dangerous enemy when misused.

There are two great difficulties in the way of the general use of tuberculin treatment:

1. The difficulty of making sure that the diseased tissue is completely isolated.

2. The danger of overstimulation of the tissues.

And three main considerations to be decided when we are doubtful as to whether we should use tuberculin:

1. Are the tissues well nourished and the functions well maintained?

2. Are bacilli already present and accessible in sufficient numbers to provoke therapeutic reaction of the organism?

3. Is it safe to induce any lytic action on these bacilli in the present condition of the patient?

Amino-Acids and Sugars in Rectal Feeding.—Short and Bywaters (British Medical Journal) assert the older observations on the absorption of foodstuffs from rectal enemata, based on the analysis of rectal "washouts," are unreliable.

The daily output of nitrogen in the urine of patients given nutriment enemata of milk or eggs peptonized for twenty or thirty minutes demonstrates that almost no nitrogenous matter is absorbed.

Modern physiological opinion holds that proteins are absorbed principally as amino-acids. The failure of the rectum to absorb ordinary nutriment enemata is largely due to the fact that peptones are given instead of amino-acids.

Chemically prepared amino-acids, or milk pancreatized for twenty-four hours so that amino-acids are separated, allows of a much better absorption of nitrogenous foodstuffs from the rectum, as demonstrated in five cases by the high nitrogen output in the urine.

The low output of ammonia nitrogen shows that this high output was not due to the absorption of putrefactive bodies. The rectal washings were not offensive.

Dextrose is much better absorbed than lactose, and relieves the acidosis of starvation.

Fat is not well absorbed. Scarcely any of the fat of ordinary milk enemata is retained.

The best nutriment enema consists of

milk pancreatized for twenty-four hours with 5 per cent. pure dextrose.

The Treatment of Umbilical Hernia in Children by the Subcutaneous Elastic Ligature.—Frazer in The London Medical Lancet, mentions the fact that umbilical hernia in infants exhibits a strong tendency toward spontaneous cure, and that by means of a simple pad for inversion of the abdominal wall over the umbilicus cure is hastened and assured, though at the expense of much watchfulness and considerable time, is led to regard favorably Brun's suggestion of a prompt and assured remedy in the form of an elastic ligature which should not be applied to children less than six months old and should be preceded by the pad method. An opening, which is large enough to admit the tip of the finger, is considered unsuitable. The sac must be empty at the time of operation. Irreducible contents of any character whatsoever must be looked upon as an absolute contraindication to the operation. As long as the opening in the parietes is suitable the size of the sac need not be taken into consideration.

The method has been practiced upon 21 patients. The procedure does not occupy more than a couple of minutes in the accomplishment and the after-treatment is of the most simple description. The preliminary treatment consists in a thorough evacuation of the bowels and the reduction of flatulence by suitable dietary before operation. A few simple instruments are required in the shape of a knife, dissecting forceps, and a blunt dissector. The essential material is a piece of elastic cord one-eighth of an inch in diameter and about three inches long. The actual technique of the operation is as follows: The skin over the fundus of the protrusion is grasped with a pair of dissecting forceps, and skin and sac are pulled gently upward from the abdominal wall. Great care is exercised in ascertaining that the contents of the sac are completely reduced. Three small incisions are made at equal intervals around the periphery of the sac, at the point where the skin is reected on to the abdominal wall. These incisions penetrate the skin and subcutaneous tissues, but they must not injure the sac. With a blunt dissector it is now possible to undermine the tissues around the pedicle of the sac—the three radiatory incisions facilitate the performance of this. The elastic ligature is now pulled beneath the skin, following the track of separation. This is most conveniently done by means of artery forceps, which pulls the ligature from one incision to another around the periphery. When the ligature is in position, the operator, having satisfied himself that the sac is empty, pulls the ligature as tightly as possible around the pedicle of the sac and fastens it so with a stout piece of silk. The ends of the elastic ligature are left protruding through one of the incisions, and they are cut to a convenient length; a simple dressing is applied and kept in position by means of a band of adhesive plaster.

The ligature is allowed to remain in position for six days and then removed by cutting the silk knot. The opening which it leaves quickly closes. This early removal of the ligature differs from the method employed by Nota, of Turin, as described by Bruns. Nota does not remove the ligature, but allows it to slough out, which it does usually about the twelfth day. An early removal is to be preferred; it in no way jeopardizes the ultimate result, and it is a much more aseptic proceeding. A dressing is worn until the wounds are healed. No further application is made.

One can only say that the results have been uniformly successful. The first case operated on was one which demonstrated the permanency of the cure. About two days after operation the child developed whooping-cough, but in spite of persistent coughing and straining there was no recurrence of the protrusion.

The advantages are that the operation is essentially of the most simple type; the after-treatment is brief and satisfactory; the cure is apparently a permanent one.

The Ductless Glands and the Nervous System.—Elliott, in the British Medical Journal, says that our knowledge of the ductless glands is still very scanty, and has been hard to come by. There is great fear lest theory and analogy should be permitted to develop into statement and assertion, and be accepted as conclusive before their foundation on solid facts has been proved. As an example may be quoted the views of the Vienna school on the actual function of the thyroid escretion, as expounded by Falta and Rudinger. The thyroid and parathyroid secretions oppose one another, the former stimulating the sympathetic nerves, the latter inhibiting them. The secretions of the pancreas and of the parathyroids retard metabolism, those of the thyroid and adrenals augment it. Hence loss of the thyroid secretion leads to: (1) slowed metabolism; (2) absence of stimulation of the adrenals; (3) escape of the pancreas from inhibition; (4) decreased excitability of the vagus in all its area of distribution, which includes the thyroid gland. This curiously intricate statement of function is purely speculative. Medicine owes no gratitude to

those who teach to her theories without proof.

One of the perplexing features of all these glands is their double anatomical constitution. In each two types of cells are found living in close neighborhood, often under the same roof, and yet there is no obvious reason why they should have chosen such a union. Thus the thyroid gland is associated with the parathyroids. Removal of the latter has been supposed, though without sufficient proof as yet, to set up the condition of tetany by means of exaggerated excitability of the skeletal muscles through their motor nerves. The pituitary gland can be divided microscopically into the posterior "pars nervosa" and the anterior glandular portion. Microscopically it is extremely complex, the anterior part containing two distinct types of cell, eosinophile and basophile (or chromophobe) respectively. The nervous part behind resembles neuroglia tissue of an indeterminate character. Between the two lies the "pars intermedia" of the pituitary, roughly resembling the anterior lobe and consisting of columns of cells enclosing alveoli distended with colloid secretion. The adrenal glands are well known to consist of cortex and medulla; thanks to the work of the Cambridge School of Physiology, it is now recognized that the adrenal medulla consists of paraganglion cells, controlled by the splanchnic nerves and secreting the adrenalin that maintains the unstriped muscle regulated by the sympathetic nervous system at a fair level of tone for its routine activities in the blood-vessels, not belong immediately to the sympathetic group; overgrowth of the cortex in children is associated with sexual precocity and premature adolscence. As for the pancreas and the testes, though they, of course, are not ductless glands in the strict sense of the word, yet each produces an internal secretion, and each again contains secreting cells of two distinct types. The cortical cells of the adrenal glands secrete a special lipoid, a doubly-refracting fat, and so do the interstitial cells of the testis. It is also of interest to note that active chemical substances of relatively molecular constitution, not destroyed by boiling, can be extracted from the adrenal and pituitary glands, and apparently from the thyroid and the pancreas also.

Increasing emphasis has been laid in the last few years on the need to look upon the ductless glands as parts of a connected whole. If one is diseased the others suffer, all having some functional relationship with each other.

Elliott ends his paper with the enumeration of half a dozen common clinical features that suggests a common bond between the ductless glands, and urges once more the pressing need for further observation and research in the matter of these tangled relationships. He particularly commends the adrenals to the attention of any neurologists who may be seeking for deeper acquaintance with the physiological processes of nervous activity.

Ringworm Treated by X-Rays.—Jones, in The British Medical Journal, says that during the last three years the single-dose method has been used. The apparatus used consists of a twelve-inch coil with a dipper brake and tachimeter for regulating the number of interruptions. This is in circuit, with an automatic cutout switch. By this means a definite number of interruptions can be given. There are also arrangements for measuring accurately the voltage and amperage passing through the primary; the milliamperage through the tube; alternative spark gap; and a Sabouraud pastile, which is bleached in the sun and used four or five times, is employed for each application.

With this apparatus the average time for treatment of a single patch varies between five and eight minutes. The advantage of the automatic switch is that one can leave the apparatus for a time, knowing that there is no danger of an overexposure. The patients are treated inside a cubicle, the operator being outside. The cubicle is made of two thicknesses of wood, sheet lead $\frac{1}{8}$ inch thick being interposed. The operator can watch the patient through a lead-glass window. As regards tubes, small light anode tubes are used, being contained in a stand fitted with lead-glass shield, which is movable in any direction.

The statistics of the last two years are as follows: The number of patients treated was 200. Of this number 93 were infected over the whole scalp; in the remainder the scalp was only partially infected, and required from one to four applications. Care has been taken to find out the number of patients who had to be re-exposed to the rays, the reason for second applications being: (1) nervousness on the part of the patients, and their inability to keep still; (2) lack of suitable tubes owing to an excess of patients—this, unfortunately, in hospital work, is no uncommon thing; (3) small infected areas which have not become epilated owing either to movement on the part of the patient or to the tube not being quite central in the holder, as tubes vary in size, and some do not fit the holder.

From all these causes 26 had to be treated a second time, this being the number out o fa total o 630 applications. The mapority

required one more application to a small area, which was given through a small lead-glass adapter. In the 93 cases infected over the whole scalp Keinbock's method was almost entirely used, five applications being given—one to the top of the head, one to the vertex, one to the back of the head, and one to each side. The usual practice was to give two or three applications each morning, and the remainder in about a week. The average time in which epilation took place was two weeks and five days. The usual time for the hair to recommence to grow was about seven weeks. In one case the hair was not fully grown for six months. In another, owing to two patients having identical names, one side of one patient's head received practically a double pastille dose. It is interesting to note that the hair returned quite healthy, although a considerable time afterward.

There has not been a single case of x-ray burn or of permanent alopecia, and one must conclude that parents would naturally report if such had not been the case.

By far the greater number of patients had been having treatment with ointments and lotions, some even for years. The treatment with x-rays is quite the best, and certainly the quickest, especially for well-established and extensive cases. With proper apparatus and in expert hands, it is perfectly safe. It is encouraging to note that several school clinics are supplied with x-ray apparatus, whic his reported to be doing good work.

It is very difficult to work out the exact cost for each patient, but it is not excessive when a large number of patients are dealt with, and, even if it is in excess of ordinary treatment, the great saving in time fully justifies it.

Oxycephy—Reuben and (Arch. of Ped) says that Oxycephaly is a congenital deformity skull and is usually due to premature ossification of the cranial bones. It is more frequent in males than in females. and it may occur in two members of the same family, or it may be transmitted to offspring. In the author's case the mentality was normal. As a rule there are eye symptoms, which appear early in the disease. Symptoms which are often associated with the conditions are early appearance of teeth, peculiarities of the elbow joint encephalocele, general epileptic seizures, and symptoms simulating brain tumor. The etiology is obscure. Optic neuritis and optic atrophy are probably due to increased cerebral pressure. The exophthalmos, the intermittent dislocation of the eyeballs, and the strabismus are probably due to the peculiar formation of the eye sockets.

Portals of Tuberculous Infection in Children in the First year of life—Medin (arch. f. Kinderheilk, Bazinsky Festschrift) says that seven thousand, six hundred thirty children died in the first year of life at the Children's Infirmary in Stockholm from 1842 to 1911 inclusive. An autopsy was held in nearly every case. Of these 623 were found to have tuberculosis, though the disease was not necessarily the cause of death.

In 287 cases the lungs or bronchial glands separately or in combination were affected, and in only six the intestines or mesenteric glands. There was not a single instance of congenital infection or of primary infection by the skin, mucosae, or larynx. During the past eighteen years no case of primary tuberculosis of the intestine or mesenteric gland was observed, and in thirty year's practice Medlin has never seen a case of infantile tuberculosis due to cow's milk.

Miscellaneous.

The following letter explains itself:

E. C. REGISTER, M.D., Editor,
Charlotte Medical Journal,
Charlotte, N. C.

Dear Doctor:

At the suggestion of Dr. T. D. Crothers, of Hartford, Conn., I bring to your notice the fact that a party of physicians and others is being formed for European travel this summer. A residence of five weeks in France will be followed by a week in Switzerland, a trip down the Rhine, and return to New York by the end of August. A French professor of national reputation will accompany the party, which will afford an opportunity for those who desire to practice Conversational French without additional cost. Should you consider this worthy of mention in your Journal it will be much appreciated.

Believe me, fraternally yours,
CHARLES F. MILLS, M.D.,
So. Framingham, Mass.

Ethylhydrocupreine in Pneumonia.

In pneumonia depending upon pneumococcus infection, Vetlesen has seen good results from the internal administration of ethylhydrocupreine hydrochloride. The salt was generally given in doses of 0.5 Gm. three times daily so that the daily amount did not exceed 1.5 Gm. In nine cases thus

treated, no other medication was employed; in all, the temperature more rapidly fell by crisis or lysis than with other methods of treatment. There can be no doubt that the drug inhibits the growth of the germ, particularly if it is used in the early stages of the disease. Where there was no effect, the infection generally depended upon some other infection. Disagreeable after-effects were not seen, though one patient took 9.5 Gm. in toto.—Berl. klin. Woch.

Neosalvarsan in Concentrated Solution

According to E. Schreiber, the technique for injecting salvarsan should not be changed, while with neosalvarsan on the other hand, more concentrated solutions can be safely employed. He now injects 0.75 Gm. of the latter drug, dissolved in only 10 Cc. of saline solution at intervals of eight days. In this way, the technique is very much simplified as only a syringe will be required. Great care is necessary, that none of the concentrated solution is deposited under the skin, as severe pains will result. It is, therefore, best first to aspirate a little blood to make certain that the needle is really in the vein.—Muench. Med. Woch.

Treatment of Carcinoma with Rontgen Rays.

The most important factor in the treatment of malignant growths of the female genitalia with the Rontgen rays is proper exposure of the affected parts. If necessary, therefore, the parts should be thoroughly dilated or incisions should be made so that the rays can reach the neoplastic structures directly. Sometimes a better exposure can be obtained with radium or mesothorium, but both these substances are not so readily available and are very expensive. Carcinomatous tissue does not react so strongly to x ray exposure as to exposure to the rays of radio-active substances, particularly because the latter can be brought more intimately into contact with the neoplasm and can be allowed to act for a longer time. The pathological changes are however the same; there is first an inflammatory irritation with reddening, swelling, tenderness and increased serous exudation which may last one to two weeks and is then followed by sclerotic shrinkage and cicatrization. As a rule, the vagina will tolerate the Rontgen rays better than the skin or other mucous membranes. Care is, however, necessary to avoid burns of the external genitalia. The shrinkage which results after several weeks may render further exposure very difficult. A scab will also form which will return even if removed constantly. It is, therefore, advisable to tampon the vagina and to use aluminum acetate bolus.

If radium and mesothorium are to be employed, the proper dosage and filtration are to be determined. As a rule, 20 to 40 milligrams of radium are sufficient unless the tumor is a rapidly growing one. If the dose employed is too large, the patients may complain of diffuse pains in the sacrum and abdomen, rectal tenesmus, diarrhea, fever, anemia and anorexia. Medium doses (150 to 300 milligrams) in rapidly growing tumors should, therefore, not be exceeded. The exposure recommended by E. Bumm and H. Voigts should not exceed 10 to 12 hours at intervals of one to two days. In some cases, it is advisable to use both Rontgen rays and radium or mesothorium together.

In looking over their histories, the authors find that 13 cases of carcinoma of the neck of the uterus and four cases of carcinoma of the vulva and vagina were apparently cured after a treatment lasting on the average 55 days. By apparently cured they mean complete cicatrization with absence of carcinomatous tissue on histological examination. Though the time of observation has not exceeded six months, it seems as if the sclerotic process has proceeded despite the fact that no further treatment was instituted. Hand in hand with the local condition, there has been a marked improvement in the general state of health. This also applies to recurrent cases where a second operation could no longer be considered.

Though the beneficial effect of the rays on the tumor cells can no longer be doubted the degree of penetration has not yet been settled and we cannot tell to what extent distant lymph-nodes are affected. In some cases observed by the author, there were no changes about 5 Cm. from the original focus. Further experiments will be necessary to determine if the action of the rays can be intensified. At all events, every inoperable case and every case after operation should be treated either with the Rontgen rays or the rays emanating from radium or mesothorium.—Muench. Med. Woch.

Treatment of Skin Diseases During Pregnancy.

Many pregnant women suffer from urticaria or severe itching probably due to intoxication with proteid substances obtained from the chorionic villi. Normally, antibodies are formed, but in certain cases these are wanting. It has, therefore, been recommended by F. Wolff to inject intra-glute-

ally the serum obtained from another healthy pregnant woman. The results are usually quite remarkable, even where large doses of morphine were necessary to quiet the patients. In one case, the serum of a patient 14 days after parturition was still active and had the desired effect.—Berl. Klin. Woch.

Treatment of Actinomycosis.

Ever since Thomassen discovered its remarkable therapeutic action potassium iodide has been used in the treatment of actinomycosis, and in the majority of cases with great success. From time to time, however, refractory cases are met with, and the author considers that probably the sluggish nature of the circulation in the neighborhood of the often edematous lesions is a potent factor in preventing the access of the salt to the diseased areas. Pinoy reports the case of a young girl who had such lesions in the neighborhood of the left inferior maxilla. They had been present about five months, and consisted of a dusky red indurated plaque, in which were interspersed soft nodules, and sinuses from which were discharged pus and serous fluid which were proved to contain the typical yellow grains of a ray fungus. The cultures on potato remained negative, those grown anaerobically on Veillon's gelatin medium were positive in five daps, and the characters of the colonies corresponded with those of the variety called "the streptothrix Israeli." The patient was immediately placed on potassium iodide 100 grains daily, but in spite of it the lesions advanced from day to day and became more edematous, so that she was soon unable to open the left eye, while the upper cervical chain of glands became enlarged and very tender, and an evening temperature developed. The patient was then put on a salt free diet, and the plaque was stimulated with fifteen galvanocaustic punctures, and dressed with lint soaked in Gram's fluid. The potassium iodide was continued. There was a very marked improvement. The edema had decreased, the patient was able to open her eye, and there was no more pain. The complaint that saltless food was most unappetizing was met with the suggestion that she should savour her dishes with the iodide, and she followed it with complete success. Syrup of the iodide of iron was given additionally. Two months later further punctures with the galvano cautery were made, and the patient was discharged cured in August. An opportunity to treat a similar case has since arisen and the method was found equally sdccessful. The point to note is that actinomycosis tends to obstruct the venous return and thus gives rise to edema which still further obstructs the circulation. The local condition is attacked with the galvano-cautery, and the general measures, so often used with success for the edema of renal and cardiac disease, namely, complete omission of salt in the diet, is a very useful adjunct in the treatment. The substitution of potassium iodide for the sodium chloride is an ingenious adaptation. —British Medical Journal.

Treatment of Enuresis.

Simpson writes that in the treatment of enuresis a change of scene will often prove beneficial. Special attention should be paid to the habits of the child. Thus, if the enuresis is most evident during the nrst few hours of sleep it should be seen that the child urinates just before going to bed and snould then be awakened about two hours later and the bladder again evacuated. This is especially important where the urine is alkaline. Regular habits of urinating throughout the day should be established, and he should be encouraged to retain the urine as long as possible. Tea and coffee should never be given, and the last meal and fluid should be at least an hour before bed time. Tilting of the bed, Simpson does not consider to be of ahy value, but plenty of fresh air and a fair amount of exercise are important.

Drug treatment averages three to six months, as the condition has become more or less a fixed habit before it is regarded in a serious way by the parents. Belladonna, potassium citrate and hexamethylenamine are three drugs of undoubted efficacy, but a careful examination of the urine is to be made before either is employed. In cases where the urine is normal, or at least presents no abnormal features, and the incontinence is the result of some debilitating condition, tonics should, be first administered, and then belladonna, commencing with ten minims of the tincture two or three times a day, and gradually increasing to 20 to 25 minims. In most cases 15 minims will be found the maximum dose necessary to be employed. In cases where the urine is extremely acid, the acidity may be reduced by ten grains of potassium citrate thrice daily, and when the acidity has been overcome, the belladonna may be begun. If the general health is not good, two or three minims of liquor strychninæ may be added. Where the urine is alkaline, dieting is of first importance, all carbohydrates being prohibited. If it is very alkaline, acid sodium phosphate may be given, and then, when the alkalinity has been reduced, belladonna as above, Where it is estab-

lished bacilli are in the urine, if this is very acid, reduce with potassium acetate, and administer hexamethylenamine, 5 to 10 grain doses, thrice daily. In mixed infection, vaccines may be used to advantage. Ergot should be tried if belladonna fails. If the child is backward mentally, thyroid extract may be tried, 5 grains daily. If the child is highly nervous and has disturbed sleep, 5 to 15 grains of potassium bromide may be added to the evening dose of belladonna.—Edinburgh Medical Journal.

Arsenic and Pancreatin in Pernicious Anemia.

Brieger recalls a publication by himself and Trebing, in which they set out that the high antitryptic titre found in persons suffering from carcinoma could be reduced to the normal level by an internal medication with pancreatin. They further found that other carcinomatous patients resisted this action of the ferment. The indications of the previous observations were interpreted as suggesting that pancreatin might when combined with other medicaments prove of some therapeutic use in certain diseases. For example, they suggest the treatment of tuberculosis with tuberculin and pancreatin. Brieger now returns to this idea and states that after a high antitryptic titre was found in the blood of persons suffering from pernicious anæmia, an attempt was made to treat this disease with arsenic combined with pancreatin. The result was beneficial, although only temporary. He gives the clinical histories of thrte cases. Two of the patients died at a later date, after they had been discharged improved from hospital. The third patient was treated three years ago and is still under observation as an out-patient. She has remained well up to the present. The treatment has therefore to be repeated from time to time, a careful control being exercised in the interval. The high titre has been reduced to normal limits. Brieger repeats that this does not mean cure, since this reduction of the titre was attained in the case of several cancer patients, and was accompanied by a constitutional improvement, but the treatment "naturally did not exercise any influence on the carcinomatous process nor did it arrest the ultimate termination of the disease." He raises the question whether the pancreatin medication may not affect a catalytic action on the diseased tissues.—Deutsch. Med. Woch.

The Vaccine Treatment of Gonorrhea.

Klause lays down the following rules for the vaccine treatment of gonorrhea: Vaccination is to be performed with a fresh vaccine, and a vaccine older than three months should never be employed. The proper administration is in intervals of 4 to 5 days, the initial dose being 5 to 10 million and the maximum dose 100 to 200 million. Slight fever is no contraindication. The vaccine does not possess any prophylactic value nor any diagnostic value, for no matter how applied there may be local or general reaction even in patients not suffering from gonorrhea or no reaction in patients with gonorrhea. The therapeutic value is most pronounced in epididymitis and gonorrheic arthritis, less pronounced in gonorrheic adnexal or cervical disease and in parenchymatous prostatitis. The results are doubtful in funiculitis and absent altogether in urethritis, catarthal prostatitis and proctitis. Relatively recent cases where no connective tissue proliferation has taken place are usually more amenable to treatment. Permanent damage from vaccination is not to be feared and untoward symptoms, if they occur, are slight and transient. The vaccine should be tried in every case where a closed focus is suspected.—Berl. klin. Woch.

Charcoal in Phosphorus and Mercury Poisoning.

In view of the many cases of mercury bichloride poisoning recently reported the results obtained by Adler (Wiener klin. Wochenschrift, 1912, No. 21) with animal charcoal will prove of interest and perhaps of some value. In a case of phosphorus poisoning, in which a large amount of phosphorus had been present in the intestinal tract for twenty hours, animal charcoal was administered by mouth and rectum. Severe vomiting and jaundice ensued but the patient recovered. In another patient, who came under treatment three hours after the ingestion of phosphorus, no toxic symptoms occurred, although a considerable amount of the poison had been consumed. Treatment consisted in gastric lavage with permanganate solution, and administration of repeated doses of 75 grains of animal charcoal and rectal irrigation with a suspension of one-half ounce of charcoal in 35 pints of water.

In a case of poisoning by three mercury bichloride tablets, besides the exhibition of milk and fluid egg albumin, and in addition to gastric and intestinal irrigation, one-third ounce of animal charcoal was administered. The patient was discharged after five days. Similar results were obtained in poisoning with phloroglucin and Schweinfurth green.

The Chemotherapy of Tuberculosis.

Renon reports the results of his experimentat and clinical observations on this

subject. He investigated three classes of substances: (1) Radioactive substances as radium and thorium; (2) mineral salts; and (3) electrical collodidal metals. The bromide and the sulphate of radium had no effect upon cultures of the tubercle bacillus, nor did either of these substances prevent or arrest the development of experimental tuberculosis in the guinea-pig. Variable results followed the use of ether agents on human beings. Whatever benefit had been derived was probably the consequence of psychic influence. The same results were obtained with thorium. The next set of experiments were carried out with the salts of nickel, yttrium, zirconium, and calcium. Chloride of nickel in a concentration of 6 to 1000 prevents the growth of a culture of tubercle bacilli, but it had no effect on the disease in the guinea-pig. In the human being doses of 5 centigrams of nickel chloride diminish expectoration and reduce the temperature in some patients but have no effect on the evolution of the disease. Chloride of yttrium has no effect on cultures of the tubercle bacillus, neither does it arrest tuberculosis in the guinea-pig. Doses of 10 centigrams in the human being improve the general condition but have no effect on the pathological process. Chloride of zirconium inhibits slightly the development of the cultures, and the evolution of the disease in guinea-pigs. Doses of 2 centigrams in man improve the general condition, particularly the weight and the appetite, and diminish the expectoration, but otherwise they have no effect. The author has obtained good clinical results with the tannate and albuminate of calcium. Electrical colloidal preparations of nickel, silica, ruthenium, and carbon were found to have no curative influence in tuberculosis. Nickel and ruthenium may relieve the secondary infections. —Bulletin General de Therapeutique.

The Use of Salvarsan in Puerperal Infection.

G. Bleynie reports four cases of puerperal infection in which after all the usual measures had been resorted to apparently without avail there were injected intravenously 30 centigrams of salvarsan. Two of the patients recovered. In the two fatal cases the injection of salvarsan was followed by a temporary improvement.—Journal des Sages-Femmes.

Thorium X In Internal Affections.

Thorium X was generally given by O. Meseth in the form of intragluteal injections and internally, twice a week. In three cases of myelogenous leukemia, there was subjective improvement in all, while the blood improved in only one. It is possible that the results will be more encouraging when other treatment, particularly the application of the x-rays has preceded the administration of the radio-active substances. Less encouraging results were obtained in lymphatic leukemia, for though the white cells diminished in number, there was also a reduction of the hemoglobin and the reds and the subjective condition remained the same. There was slight improvement in one case of splenic anemia and in a number of cases of secondary anemia where the primary condition was corrected. The whites were never reduced to any marked degree and the hemoglobin rose much more slowly than the number of the reds. In two cases of pernicious anemia, large doses decidedly aggravated the condition. In obesity, the body-weight was hardly influenced but an attack of gout, from which the patient also suffered, was provoked. In one case of lympho-sarcoma, the glandular metastases were only slightly affected but the skin metastases became more flat. After-effects were here very pronounced (diarrhea, lassitude, vertigo and anorexia). No results were seen in multiple lymphomata while two cases of focal spinal disease showed some improvement. In one case of arteriosclerosis, the blood-pressure could not be reduced by the thorium to any appreciable extent. The following may be said of other affections: Sciatica, good results, lancinating pains of tabes, no results; chronic rheumatic arthritis of the exudative and dry type, favorable results. It is best always to begin with small doses and to increase gradually except in leukemia, where large doses may be used from the beginning. In the articular affections, the analgesic effect is the most pronounced. It is difficult to say if the internal or the intramuscular administration is to be preferred, since good results have been seen after both. The after-effects in general were slight but it is best to count the leucocytes since a decided leukopenia would call for discontinuance of treatment. The best results were obtained in anemia exclusive of the pernicious type, sciatica and in secondary, chronic joint affections.—Muench. Med. Woch.

The Treatment of Chlorosis.

Robin points out that one of the primary indications in this condition is to check the excessive functional activity of the stomach. This is accomplished by the administration of extract of belladonna before meals, and of antacids after meals. The malnutrition is combated with the aid of arsenic administered per rectum or subcutaneously. In

the former case the following solution is used:

℞ Fowler's solution, 6 c.c.
Distilled water, 94 c.c.

Of this 5 c.c. are injected into the rectum every morning, following a cleansing enema. For hypodermic use cacodylate of sodium is administered in doses of 5 centigrams daily for eight days, with an intermission of four days, followed by a second series of injections.

Of the preparations of iron Robin prefers the iron and potassium tartrate and the reduced iron, the latter being especially indicated in cases in which a rapid effect is desired. If there is gastric irritability lactate of iron is given. Chloride of iron produces the best results in cases in which there is a hemorrhagic tendency.—Bulletin General de Therapeutique.

The Management of Acute Bronchitis in Children.

Sutherland states that if in the early stages, as often happens, there is a dry, irritating cough, the indication of increasing bronchial secretion by the inhalation of steam may give great relief. If there is dyspnea from bronchial spasm hot fomentations to the back and front of the chest are indicated. In mild cases of bronchitis no other treatment is necessary than to apply to the chest some stimulating liniment. In more pronounced cases the bowels should be freely opened at the onset of the attack and a simple febrifuge mixture should be ordered, such as the following:

℞ Potassium citrate, 5 grains.
Tincture of orange, 5 minims.
Solution of ammon. acet., 15 minims.
Camphor water, ad 1 dram.

As regards cough mixtures, it is pointed out that these tend to upset the digestion. If bronchial secretion is defective and there is a harsh, irritating cough iodide of potassium and carbonate of ammonium may be given in doses of two grains each. If bronchial secretion is over abundant the following may be given:

℞ Tincture of belladonna, 4 minims.
Dilute nitrohydrochloric acid, 3 minims
Glycerine, 10 minims.
Comp. infusion of gentian, ad 1 dram.

If special sedatives seem called for, a convenient form of administration in children is the use of pastilles containing one fiftieth of a grain of codeine. In the convalescent stage cod-liver oil and hypophosphites give the best resultsr—"The Treatment of Disease in Children."

Pituitrin as an Oxytoxic.

Malinowsky (Zentralbl. f. Gynak.) reports very favorably on pituitrin, and publishes charts showing the rhythm of uterine contractions—normal, violent, and tetanic—excited by doses of this material. His researches were conducted in the Obstetrical Department of the University of Kasan. In suitable doses pituitrin acts promptly on the uterine musculature. Intrauterine pressure rises greatly after injection, the action of the body beginning in about five minutes; it does not matter whether the upper arm, thigh, or the abdominal wall be chosen. The effects of 1 c.cm. of pituitrin last for about one hour. The duration of each pain is perceptibly diminished, and so are the intervals between the pains. After a moderate dose the pains show a normal rhythm—increment, acme, and subsidence. "Sturmwehen," however, are noted after almost every administration of pituitrin, and are violent according to the amount injected; these tetanoid contractions last for about eleven minutes, but Malinowsky seems to consider them to be a physiological curiosity, as he has never found them to do any harm to mother or child. Pituitrin acts most favorably in the second stage of labor and at the end of the first. In the earlier state of dilation of the cervix pituitrin sets up true tetanic contractions, lasting over one-quarter of an hour in certain cases under observation. They were primiparæ with membrances unruptured and cervix but little dilated, or multiparæ with marked rigidity of the os externum. Yet in both types the uterine contractions returned to their normal character and rhythm as labor advanced. In primiparæ after rupture of the membranes tetanus of the uterus was not observed. The feta lheart sounds during the tetanic spasms fell to 60—50 beats per minute, but rose as labor progressed, and the child was born alive without any signs of asphyxia. One cubic centimetre is quite enough for a dose; repeated smaller doses are less satisfactory. The strongest dose not liable to produce ill effects is about 13. c.cm. The dose can always be repeated; the second, whether given whilst the effects of the first persist or after they have subsided, never fails to act on the uterine muscle. The third stage is, as a rule, uncomplicated; "the placenta was always expelled spontaneously," and atony of the uterus after delivery was not observed in the cases under Malinowsky's care. Pituitrin appears to be contraindicated where the mother is subject to cardiac and renal disease. Altogether Malinowsky considers pituitrin to be an excellent oxytoxic, and the injection is pain-

less. But, he repeats, caution is necessary in the earliest stage of labor and in cases of rigid os, independently of pelvic contraction or impediments due to the fetus.—British Medical Journal.

We have had occasion to review many works by English, American, and German authors upon tuberculin treatment during the last few months, and it must be confessed that the practical outcome of their writings is disappointing. In spite of the elaborate investigation conducted in our own and foreign medical schools, the treatment of any individual case must be more or less of a leap in the dark. In the great majority of early cases there is a marked improvement for a time, but the number of patients who have made recovery of a permanent character does not appear to be much greater than under the pre-tuberculin methods of enforced hygiene. Although this may be due, as Dr. Allen states (oJurnal of Vaccine Therapy), to indiscriminate use of imperfect materials, it is nevertheless manifest that the ideal tuberculin has not yet been found, and that the method of its action on healthy and unhealthy cells respectively has not been satisfactorily worked out.—Editorial, Brit. Med. Jour.

Antiferments in the Treatment of Cold Abscess.

Cocco reports the results of this treatment. The reason why cold abscesses are not absorbed like abscesses due to pyogenic infection is the absence of proteolytic ferments in the former. The pus of a cold abscess is made up mostly of broken down lymphocytes, whereas in pyogenic abscess the pus contains large quantities of polyneuclear leucocytes which contain a proteolytic ferment. To hasten the absorption of a cold abscess it seems therefore rational to inject either a proteolytic ferment of some substance capable of inducing its formation. Hydrocele fluid into tuberculosis abscess sufficed to bring about a cure within nine days. Another important feature of this mode of treatment is the avoidance of the ugly scars common after cold abscess.

For diagnostic purposes a few drops of the pus from a suspected abscess should be placed on solidified serum and after a few hours liquafaction with cavity formation takes place if the pus contains leucocytes, but the serum remains solid if it is tuberculosis pus. If the abscess has begun to be absorbed the proteolytic action is somewhat retarded. The presence of blood in small quantities does not interfere with the reaction.—La Tribune Medicale.

Gastric Hyperacidity.

Bile has been shown by the author, both clinically and experimentally, to diminish the acidity of the gastric juice and inhibit peptic activity. In view of the irritating effect and possible corrosive action of the gastric juice in gastric ulcer, he was led to try bile therapy in this affection, with gratifying results. Sodium choclate, 0.2 Gm. (3 grains), made into an emulsion in an equal amount of oil and inclosed in a gelatin capsule, was the usual mode of administration; 0.1 Gm. (1½ grains) of cholic acid was also sometimes used. In 33 cases thus treated, including some of other affections besides gastric ulcer, considerable benefit was often noted. In some of the patients a complete cure of hyperacidity and the gastric disturbances dependent upon it appears to have been obtained.—Glassner in The Wiener Klinische Wochenschrift.

Hemoptysis.

Striking results are reported by the author from subcutaneous injection in the flank or thigh of 0.04 Gm. (2-3 grain) of emetine hydrochloride dissolved in 1 c.c. (16 minims) of water. In 20 cases of hemoptysis thus treated the bleeding was constantly and immediately arrested. No unfavorable accompanying effect was observed, with the exception of temporary local pain in the most sensitive individuals treated. In the more severe cases bleeding may recur some time after the first injection, and the author therefore now repeats the measure in twelve hours, again the next day, and, if necessary, on the fourth and fifth days. In some cases the emetine acted so thoroughly that soon after the injection there was no longer a trace of blood in the sputum. In only 1 case, and that of galloping tubercuoosis, did the drug not produce permanent arrest of the bleeding. The modus operandi is obscure, the blood pressure, coagulability and cell counts remaining uninfluenced.—Flandin in The Presse Medicale.

Hemoptysis.

Gratifying results from saline infusion in 50 cases of hemoptysis are reported by the author. He injects intravenously 5 c.c (80 minims) of a 10 or 15 per cent. solution of sodium chloride. Such injections cause no pain and are entirely innocuous. In cases with slight or moderate bleeding, in the predominantly fibrotic form of lunk tuberculosis, the hemoptysis is always arrested by the measure. Where over 100 c.c. of blood ha sbeen lost it occasionally fails, but is well worth trying in every case. In 21 of the 50 cases treated the tendency to hem-

morrhage was permanently overcome; in 14 other cases, bleeding was checked at once, but recurred in a few days; in 4 patients the hemorrhage taking place at the time was not stopped, but the tendency to later hemorrhage apparently removed; in only 5 cases did the measure completely fail to benefit. After a hemorrhage has been arrested by the saline infusion the author gives a second and possibly a third injection in the course of the day for the purpose of preventing recurrence. The measure is considered by the author to act by osmosis, the concentrated salt solution causing an exchange of fluids between the blood and the tissues which probably mobilizes substances favoring coagulation. The maximal effect develops in twenty minutes, after which it subsides in the course of an hour.—Muller, in The Beitrage zur Klinik der Tuberkulose.

Hemorrhage.

The author recommends an intravenous injection of 200 c.c. of a 5 per cent. solution of glucose to arrest severe bleeding where direct surgical methods are not practicable. In abundant intestinal hemorrhage in typhoid fever even a 20 per cent. solution may be used to advantage. The infusion is repeated as often as required and is not followed by a rise of temperature or other untoward phenomena. The physiological effect is the same as that of the hypertonic salt solutions which have for some time been recommended in severe bleeding. It seems that the tension of the blood in its relation to the tissues is so changed that a large amount of hemostatic ferment is given off by the latter. In hemophilic conditions the author has injected 200 c.c. of a 10 per cent. solution with good results. Instead of the glucose, cane-sugar may also be employed. In diabetes caution is necessary. Sugar solution is in many instances preferable to salt solution in that a certain amount of food is introduced into the body with it.—Scheiber, in The Therapie der Gegenart.

Mesothorium.

The utility of mesothorium in the treatment of skin cancers, especially those of restricted dimensions, is emphasized by the author. Mesothorium possesses very much the same properties as radium and is much less expensive. The dose used is 4 to 20 milligrams, and the duration of application one-quarter to one and a half hours. Excellent results ere obtained by the author ith mesothorium in the treatment of 40 cases of cutaneous epithelioma. Nobl, International Medical Congress.

Mumps.

The blood in mumps shows definite changes in the corpuscular content consisting (a) in a slight increase in the total number of leucocytes, and (b) in a lymphocytes which is both relative and absolute. The lymphocytosis is present on the first day of the disease and persists for at least fourteen days. The occurrence of orchitis does not invariably alter the blood-picture. The blood changes are of distinct diagnostic value in differentiating mumps from other inflammatory swellings of the parotid or submaxillary salivary glands and from cases of lymphadenitis. A lymphocytosis of the cerebrospinal fluid occurs when mumps is complicated by meningitis or by lesions affecting the cranial nerves. It has, however, also been found in cases of mumps which have presented no clear clinical symptoms of any organic lesions of the nervous system. From a consideration of the blood and cerebrospinal fluid, one is justified in assuming that the virus of mumps excites an inflammatory reaction, the characteristic feature of which is a great aggregation of lymphocytes.—Feiling,in The London Lancet.

Ovarian Grafting.

The following conditions are regarded by the author as essential to the success of a grafting operation: (1) Aboslute asepsis and the avoidance of strong antiseptics which would destroy the vitality of the tissues. The apparent contraindication to this in the case of chronic pyosalpinx and salpingo-oophoritis is met by the fact that the pus in such cases is usually sterile, and the tissues may be treated as surgically clean. (2) The employment of minute or "seedling" grafts. (3) The presence of a good vascular supply in the tissue used as the bed for the graft. Muscle is entirely satisfactory for the purpose. (4) The ovarian tissue should be left in contact with the body fluids within the peritoneal cavity until it is required for the grafting. In the case recorded in the author's paper the ovary was placed in Douglas' pouch until the time arrived for closure of the abdominal wound.

An important use for the grafting operation is as a conservative measure when it is necessary in a young woman to remove uterine appendages for old-standing inflammatory disease, without having to sacrifice the uterus. Another possible indication is that of transplanting fragments of ovarian tissue in cases of severe dysmenorrhea, where, in performing oophorectomy, it might be possible to bring about a cure without at the same time unsexing the patient.—Whitehouse, British Medical Journal.

Partial Chronic Adrenal Insufficiency in Children.

The author points out that there may occur in childhood, either spontaneously or as a sequel of some acute disease, slightly marked but persistent disturbances which at length react seriously on the general state and growth of the child and which are due to partial insufficiency of the adrenal function. In very young children thus affected, development in weight and height is at a standstill, the muscles are flabby, walking is delayed, and the child is apathetic and at times somnolent. Adrenal therapy or the simple administration of small doses of epinephrin bring about more or less rapid cessation of these manifestations. In somewhat older children retarded growth in height is the most marked phenomenon. In boys, before puberty, there is noted a condition of apathy, fatigue, and physical and mental indolence. The child grows thin and the blood-pressure is low. Administration of adrenal preparations under these conditions renders the boy more alert and leads him to work better and suffer less fatigue; the blood-pressure rises and the body weight and stature augment in a few months. Manifestations such as those described may, of course, be due to other conditions, but the benefit accruing from adrenal therapy in many cases would seem to indicate a specific deficiency on the part of the corresponding organs.—D'Œlsnitz, Presse Medical.

Pituitary Extract in the Treatment of Hemoptysis.

Rist, reported to the Societe Medical des Hospitaux that he had obtained excellent results in the treatment of hemotysis by means of the intravenous injection of pituitary extract. One half c.c. of the extract, representing one decigram of fresh substance, is the does injected by the author into a vein at the bend of the elbow. The hemostotic action is generally immediate. A sbingle injection suffices to arrest a profuse and rebellious pulmonary hemorrhage No other remedy has so lasting and rapid an effect.—La Bulletin Medical.

An Apparatus for the Intratracheal Administration of Ether.

This is a modification of the apparatus which is pictured in the British Journal of Surgery. It has been altered in many ways with the view to cut down weight and cost and to ensure simplicity. It consists of two parts: (a) the motor and blower; (b) the ether apparatus.

A.—The air current is supplied by an electric motor of ⅛ h.p., driving a rotary blower, and is made to pass from the blower through an air filter, and then through a two-nicked Wolff's bottle half-filled with water. The air filter serves the double purpose of picking up dust, etc., and of removing oil and grease. It consists of a rounded metal chamber, 5 inches high, 1½ inches in diameter, with an entry tube at the bottom for connecting up to the blower, and an exit tube at the top issuing from a screw-on lid. Inside are three metal perforated discs fixed at equal distances upon a central rod, the lower end of which rests upon the bottom of the chamber; the upper end projects above the topmost disc and forms a handle for removal. Several layers of gauze are placed upon the discs, which fit accurately the interior of the chamber, so that all the air passes through them. This part of the apparatus is efficient, but it is my hope to combine it and the wash-bottle in some simple arrangement.

A resistance and speed-regulator controls the velocity of the air-current. A motor for a continuous current of 105 volts, driven from the main has been selected, since by placing a lamp in the circuit any continuous current up to 250 volts can be used. If the electric current breaks down, or is not suitable, or not available, a foot-bellows in conjunction with the wash-bottle must be used.

B.—The ether apparatus consists of an ether chamber, a warming chamber, and a mercury safety-valve, all connected together by metal tubing of ⅜-in. bore.

The ether vessel is round and made of metal, with fixed lid, in the centre line of which are placed entry and exit tubes as far apart as possible. It has a diameter of 13 cm. and can take 30 ounces of ether when filled up to a mark on a glass gauge. There are also a funnel for filling and a tap for emptying the chamber. Metal has been chosen in preference to glass, as it is lighter, is not easily damaged, and can be made to any pattern or size. The chamber can be cleaned either by running hot water through it or by boiling after the glass gauge has been removed. The air-current passes over the surface of the ether.

The warming chamber is of the same size as the ether, and is also made of metal, with a loosely-fitting lid and an emptying tap. Inside is a coil of metal tubing. The exit tube is 3 inches in length, and bears a shielded thermometer and a tap for reducing the air-volume several times a minute.

Between these two chambers stands a glass mercury safety-valve, with a short arm projecting from the upper part at right-angles, and carrying a cup to prevent spilling of the mercury when the valve blows off. A manometer is an unnecessary encumbrance, as the safety-valve indicates the

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respiratory movements, and it is not essential to know the pressure which is being used at any given moment. It is only necessary to know that a certain safe pressure, say 20 mm. or 25 mm. Hg. cannot be exceeded.

A tap for connection with an oxygen cylinder is provided in the circuit before the ether chamber. This can also be used to reduce the air pressure from the blower, as it is my experience that in some cases the blower delivers either too small or too large an air-stream. Another way out of this difficuty is to use the motor at the "just-too-slow' 'speed, and supplement the current of air by a stream of oxygen. In all cases there is an optimum ventilation. Gas and oxygen can also be administered through this oxygen tap. I am at present working on this method.

The ether chamber is connected to the main tubing by the tap used by Elsberg, which has an entry and an exit tube, and consists of a central cog-wheel bearing a handle and gearing with two lateral cog-wheels. Each of these wheels bears a tap. By turning the handle any desired proportion of the air-current can be made to pass over the ether, or the air can be made altogether to miss the ether. A pointer on the handle shows the proportion of air and ether delivered to the patient, which is warmed up by its passage through the heating chamber.

The delivery tube from the latter is provided with 3 ft. of india-rubber tubing, the distal end being slipped over the catheter. Hot water is placed in the warming chamber, and the motor started before induction of anæsthesia. The tubes then are warmed up by the time the catheter has been passed, and generally speaking the thermometer stands at 120 deg.-125 deg. F. This temperature remains fairly constant for ten minutes, when fresh hot water must be added. An electric heating device may be used, but it has been thought desirable to make the outfit as simple as possible, and not too costly.

The ether apparatus is carried in a box of 3-ply wood, and has been made for me by the Surgical Manufacturing Company, 85 Mortimer Street, W. The electric direct laryngoscope and the linen-woven catheters have been made in accordance with my ideas by Messrs. Mayer & Meltzer, Great Portland Street, W.—Shipway, in Bristol (England) Medico Chi-Journal.

Scarlet Fever in the Aged.

In the Edinburgh Medical Journal, December, 1913, Dr. Claude B. Ker, Lecturer on Infectious Diseases in the University of Edinburgh, reports the case of a man, aged seventy-four years, who was admitted to the Edinburgh City Hospital (of which Dr. Ker is Medical Superintendent) on June 16th, 1913, for "observation" for scarlet fever. The patient had been seen previously by Dr. Robert Robertson and by Dr. Maxwell Williamson, the Medical Officer of Health for Edinburgh. It was stated that he had been "out of sorts" since June 12th, that vomiting and shivering occurred on the 14th, and that a rash was noticed on the morning of admission. The body was covered with a brilliant scarlatiniform eruption. The limbs were also covered with the rash, which was more pronounced on the flexor surfaces. It was found that the man had taken no drugs had received no enema, and had not previously suffered from erythema. No direct exposure to scarlet fever could be traced, but at the time of his admission cases were being admitted to hospital from the street in which he lived. The attack presented the features of scarlatina, and on June 26th desquamation of a characteristic kind was visible all over the trunk and arms. The patient was discharged well after a hospital detention of forty-three days. There seems little reason to doubt the diagnosis. Particularly characteristic were the rash, the changes in the tongue, the complications of otitis and arthritis which occurred, and the regular sequence of desquamation. Dr. Ker has been at the pains to collect statistics on the subject, and arrives at a grand total of 263,986 cases treated in modern fever hospitals, of which only twenty occurred in persons above the age of sixty years, while of these only two are definitely stated to be seventy years and upwards. The case now reported, therefore, has some claim to be considered a rare one.—The Dublin Medical Journal.

Exophthalmic Goiter in Cases of Syphilis.

Among the numerous infections that may bring on symptoms of Basedow's disease, syphilis is one of the most important from the practical standpoint, in view of the favorable effects obtainable with specific treatment in such cases. Hischmann observed in Gaucher's clinic the case of a girl of 19 years, with syphilis of six months' standing, in whom, after treatment for secondary manifestations had been given, rather suddenly developed a swelling in the central and lower portions of the neck, especially on the right side. The swelling rapidly increased in size, and became both

painful and tender. There was no exophthalmos, but slight tremor and tachycardia (120 per minute). The patient also complained of mild attacks of epistaxis, of frequent sensations of heat and profuse perspirations. Under the influence of injections of mercury benzoate and of potassium iodide, these phenomena almost completely disappeared.

As Gaucher and Levy-Frankel have shown, the Basedow syndrome may be observed in the secondary stage of syphilis, when it is frequently preceded by specific buccopharyngeal ulcerations. Its onset is generally insidious, the earliest sign being usually tachycardia, less often thyroid enlargement. Clinically, there is no means of distinguishinff it from exophthalmic goiter dependent on any other cause, except the efficacious action of mercury and iodide, which constitutes the sole argument in favor of its being essentially syphilitic in nature. Potassium iodide, indeed, often badly borne by Basedow cases, here exerts a favorable effect.—Milian, in Paris medical.

The Technique of Operation for Carcinoma of the Breast.—Pearson, in The Dublin Medical Journal, has a paper on this subject. He pointed out the principle on which modern radical operations for carcinoma are based, and laid down certain secondary principles of importance. These are:

(1) To avoid dissemination and wound-implantation of cancer cells during operative procedures.

(2) To minimize hæmorrhage and shock.

(3) To minimize the risks of infection.

(4) To avoid unnecessary mutilation and loss of function. The scope of the radical operation in favorable cases of carcinoma of the breast, in the light of Handley's investigations, was indicated, and the application of the secondary principles to the procedure was discussed. If regard to these be observed the author considers that there is only one best method of performing the operation.

The precise technique adopted was then explained with the aid of lantern slides, the special points on which emphasis was laid being:

(1) That extensive removal of the fascial tissues with their contained lymphatics was the most important safeguard against recurrence.

(2) That the operation, even in the making of the cutaneous incisions, should be regarded as a two-stage procedure—an axillary portion which should be first carried out, and secondly an abdomino thoracic portion.

(3) The use of the deep fascia over the clavicular fibres of the pectoralis major (which fibres may safely be retained in favorable cases) as a guide to the separation of the clavicular from the sternal divisions of the muscle.

(4) The use of clamps on the pectoral muscles before division both to act as detractors and to prevent possible dissemination.

(5) The systematic exposure and securing of the blood vessels in such a way that the operation is practically a bloodless one.

(6) The necessity for additional drainage, besides the ordinary drain in the axilla, in certain cases.

(7) The reconstitution of the axillary vault as the greatest safeguard against subsequent loss of function.

(8) The importance of early movements of the arm.

Danger Attending the Use of Epinephrin in Light Chloroform Anesthesia.

Levy, in experiments on cats under deep chloroform narcosis, had found that if a small dose of epinephrin hydrochloride solution is injected into a vein, there occurs a well-marked rise of blood pressure, later followed by marked irregularity of the heart. If the same injection be made, however, into an animal under light chloroform anesthesia the resulting action is more intense, n fact almost invariably fatal, death being

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due to ventricular fibrillation. Levy had observed a similar action in man, the effects of epinephrin in a lightly chloroformed subject being acceleration of pulse with raised tension, then still greater frequency with the pulse less readily felt and sometimes perceptibly irregular at the wrist. A few temporary pauses may be noted, and then the heart suddenly ceases beating;the pupils dilate widely, intense pallor supervenes, and cessation of respiration usually follows. In a few cases a fatal termination resulted.

The author of the present paper reports sudden death from stoppage of the heart as a result of the injection of 5 minims of a 1:1000 solution of epinephrin in the nose of a patient who had been anesthetized with chloroform. At the time of the injection anesthesia was light, the corneal reflex being brisk, and no more chloroform was given. All attempts to resuscitate the heart failed.—Depree, in The British Medical Journal.

Treatment of Intussusception.—Garrow (Canadian Medical Association Journal) in a report of seven cases, states that in all of them morphine was given prior to ether or to gas and ether. Operative procedure should be carried out as quickly as possible and with as little exposure of the body and viscera as is attainable. The incision chosen must correspond to the seat of invagination and should not be too short, thus avoiding injury to the wound and delayed healing, and facilitating ready exposure of the invagination and its reduction or operative tratment. The invagination should be reduced by expression if possible, aided carefully if needs be by traction proximal to the neck. If after a fair trial this cannot be accomplished, or if the conditions present denote death or organic fixation of the intussusceptum, then the operator must decide quickly on one of several methods: 1. Lateral anastomosis above and below the intussusceptum restores the fecal flow, but cannot be employed in acute cases with gangrene supervening, though useful in chronic ones. 2. End to end or lateral anastomosis after excising the intussusceptum is the method most frequently chosen by the writer when gangrene is present,but should not be employed in extensive invaginations. 3. The Jesset-Barker operation is particularly applicable to extensive intussusceptions,and is frequently employed in the shorter forms of enteric and enterocolic types. He says that the chief objection to this operation is the danger of soiling and infecting the peritoneum. He does not think it can be as quickly performed as a resection with lateral anastomosis. 4. Enterostomy is a doubtful procedure in infants, but is applicable to desperate cases in adults as a temporary measure in impendiuff death from obstruction. 5. Eliot's plan of catheterizing the invaginated bowel by passing a catheter in through the sheath and apex of the intussusceptum until it enters the proximal and dilated bowel is ingenious, but the author cannot speak from experience of its utility. It has been his custom in reducible cases, particularly in children, to lessen active peristalsis by using an opiate for the first forty eight hours after operation.

Some Additional Experiences of Nerve Surgery.—Tubby, in The London Lancet, gives an account of the present condition of a number of cases previously reported by him. One case of facial paralysis, where a facio-hypoglossal anastomosis was done, proved a permanent and almost complete success. Two cases of brachial plexus operations, one for an Erb's paralysis and the other for a severe laceration of the plexus, showed remarkable improvement. Neuroplasty on the popliteal nerves, after anterior poliomyelitis, was not very successful. Six very interesting and instructive newer cases are then described. The diagnoses and results are as follows: (1) Traumatic lesion of the brachial plexus, nearly complete recovery; (2) injury of the sub-scapular branch of the brachial plexus, recovery; (3) divided ulnar nerve in the middle of the forearm, recovery; (4) ulnar nerve injury at the wrist, division of the superficial branch and bulbous condition of the main branch, partial recovery; (5) division of the deep branch of the ulnar nerve, partial recovery; (6) traumatic lesion of the deep branch of the ulnar nerve, nearly complete recovery.

He says that, "Brachial plexus lesions, if traumatic, are hopeful, if the loss of power has not existed for years. If due to other causes the outlook is not so good. However, we should not despair of a case recovering, even five years after the operation, provided that the improvement has set in within three months after the operation and is continuous; (2) popliteal neuroplasty for infantile paralysis has proved disappointing * * *; (3) injuries about the wrist should never be sewn up until the continuity of the nerves has been ascertained and until all the electrical reactions have been tested; (4) if the lesion of the nerve is compression by a scar the outlook after operation is most hopeful. If the nerve has been severed,primary operation is very hopeful, but secondary rarely permits a complete recovery; (5) no case, however, of traumatic nerve lesion should

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be regarded as hopeless, in view of the achievements of neuroplasty."

Duodenal Diverticula.—Wilkie (Edinburgh Medical Journal) concludes: 1. Diverticula of the second and third parts of the duodenum are of congenital origin. 2. In the first part of the duodenum three types of diverticula are met with, the congenital, the ulcer diverticulum, and the acquired wide-mouthed diverticulum of the duodenal vestibule. 3. Congenital duplicature of the duodenal wall may occur either along with or independently of diverticula; it is probably due to the persistence of a condition normally found at an early period of fœtal life, and is in fact but a mild degree of that arrest of development which in its most pronounced form is met with in cases of congenital atresia of the duodenum.

The Treatment of Gastric Vertigo.

Robin recommends the following as an effective remedy in cases that do not respond to the use of simple carminatives and antacids:

℞ Magnesium hydroxide, 0.3 gram.
Prepared chalk,
Sodium bicarbonate, aa 0.2 gram.
Powdered nux vomica, 0.03 gram.
Powdered belladonna root, 0.02 gram.

This powder is to be taken after each meal, and at bedtime.—Bulletin General de Therapeutique.

Vaccination for Typhoid Fever.

Vaccination, preventive and curative, is now largely employed in France for typhoid fever. All the doctors have received official circulars drawing attention to this new and, as has been proved, effective treatment and stating that a supply of vaccine is at their disposition when necessary.

As a preventive this vaccine will become in time as popular as the Jenner vaccine, and will be freely used for children and adults in periods of epidemics. Last summer a severe outbreak of typhoid fever occurred in the town of Avignon; nearly half the population was vaccinated with the result that the epidemic was stamped out. Naturally severe hygienic measures were taken also.

As to the counter-indications, the antityphoid vaccine should not be employed in subjects suffering from any acute or chronic affection; coryza, grippe, tonsillitis, bronchitis, pulmonary or febrile gastric affections, enteritis. Among the chronic affections may be classed tuberculosis, malaria, syphilis, cardiac and renal disease, diabetes.

Generally, says Army Inspector Dr. Schweider, it would be well not to choose a moment of mental fatigue (studies for examinations) or where the patient is debilitated or at the menstrual period of women.

The vaccine is delivered in ampoules of 2, 5, 10 and 20 cubic centimetres. Each ampoule contains a label indicating its origin and the date of its manufacture. The vaccine must be kept in a cold place and away from the light; in this way it maintains its effect over three months.

The syringe used may be that of Pravaz or Luer, but of a capacity at least of two and a half cubic centimetres.

The seat of injection is the left shoulder (the right in left-handed persons) behind the posterior edge of the deltoid and two fingers' breadth above the axillary fold. The skin is first painted with iodine, and the liquid injected slowly beneath the skin, under the aponeurosis or into the muscle, and the patient recommended to keep his arm quiet for two hours.

The vaccination requires four injections at intervals of from seven to ten days at the following doses:

1st injection, half a cubic centimetre.

2nd injection, one cubic centimetre.

3rd injection, a cubic centimetre and a half.

4th injection, two cubic centimetres.

For children these doses will be reduced by one half. A drop of tincture of iodine seals the little orifice.

Although the patients need not interrupt their occupations, certain precautions should be taken, as abstention, the day of inoculation, from all fatigue or excess in eating and drinking. They should be made to understand that they should not consider themselves as immunized until they have received the complete series of injections, and not before twenty days have elapsed since the last injection.

The best time of the day for the injection is from four to six in the afternoon, as if any reaction took place it would pass away unnoticed during sleep.

The duration of the immunization is not, at the present time, definitely fixed, but it is supposed to cover two years and a half.

As curative treatment, the vaccination influences favorably the course of the malady when employed in the early stage and provided that the spleen is not too much enlarged. Preference should be given to autovaccine, but this is not easy to obtain; the choice rests with the hetero-polyvalent vaccine of Wright. Under its influence the fever goes down slowly but progressively, and convalescence is less prolonged.—Medical Press and Circular.

Moonlight and Decay.

The observation that the rays from the moon favor putrefaction detracts from the romance which has long been associated with moonlight. It is an old tradition that to sleep in the moon's rays was a dangerous proceeding, and there is such a thing as "moonblink," a temporary blindness said to be due to sleeping in the moonlight of tropical climates, while some observers have reported a devitalizing action of the moon's radiations on vegetable life. There is even quoted a death the cause of which was officially stated to be exposure to moonlight. Apparently the food most seriously affected by the moon's radiations is fish, and seemingly trustworthy statements have been made as to the ill effects produced in persons who had partaken of fish which had been freely exposed to moonlight. Mr. E. G. Bryant, B.A., B.Sc., writing in a recent number of the Chemical News from Port Elizabeth, South Africa, suggests that a possible explanation of these phenomena, assuming them to be true, might lie in the well-known fact that the light of the moon, being reflected light, is more or less polarized, and possibly polarized light may exert a peculiar chemical action. Subsequently, polarized light was obtained from a powerful metallic filament lamp, the light being polarized by means of a pile of sheets of plate glass backed with silver and placed at the correct angle. The experiments showed certain marked results when fish was submitted to the polarized light obtained in this way, although it is probable that stronger effects would be obtained with a more powerful source of light. When two slices cut from the same fish were hung, one in the direct light and the other in the polarized beam, the latter invariably began to decompose before the former, though the temperature of the polarized beam was several degrees lower than the direct light. There were indications also in the case of other perishable food substances of a tendency to decompose when they were bombarded with polarized light. The question is worth further investigation, and there should be little difficulty in pursuing such a line of research. There are so many influences ascribed to moonlight that it would be of obvious interest to have some scientific evidence tracing a definite action to the rays. It would be curious to find that such terms of obloquy as "moonstruck," "mooney," and "moonshine" were after all not entirely empirical.—The London Lancet.

Intestinal Motility.

This question was studied by the author in rabbits, the intestines being removed from the body, kept under physiological conditions of temperature, isotonicity, oxygenation, etc., and the drugs under consideration added to the Locke solution which was being perfused through the mesenteric vessels. Dilute hydrochloric acid, sodium bicarbonate, barium chloride, sodium sulphate, aloes, senna, calcium chloride, cascara, rhubarb, castor oil, and phenolphthalein were each found to enhance the contractions of the small intestine, acting with about the same intensity whether placed in the lumen of the gut or added to the perfusion fluid. On the other hand, magnesium sulphate, opium and its derivatives, belladonna, and chloroform water were found to paralyze the intestinal movements. Substances that excite peristalsis act in various different ways. Their action is not limited to the intestine alone, some of them, such as sodium sulphate and senna, causing the formation of peristaltogenous substances which, discharged into the blood stream after the manner of hormones, become diffused throughout the system and excite intestinal contractions. The blood serum and extracts of organs of animals purged before death with sodium sulphate or senna cause a distinct increase in peris-

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New York

talsis when perfused through the isolated intestine. Motion pictures and the introduction into the intestine of starch paste colored with carmine were among the methods employed by the author for studying in detail the peristaltic movements and the progression of the intestinal contents under the influence of the various drugs.—Glenard, in The These de Paris.

Mucous Colitis.—Mantle, in the Med. Press and Circular, London, describes the treatment of mucous colitis as carried out at Harrogate and Plombieres: Treatment by irrigation has been carried out for several years at these places. The object is to wash away any old fecal matter and mucus, and so getting a healthier condition of the mucous membrane. At Harrogate an alkaline sulphur water is used with excellent results. The complete bath is carried out in the following way: It consists of two parts—first, irrigation of the bowel by a hydrostatic douche, given through a long rubber tube which is attached to a long rectal tube. The latter is sterilized by boiling and passed into the rectum. The colon is washed out with with 20 to 30 ounces of alkaline sulphur water at a pressure of two feet, and at a prescribed temperatura, usually 105° F., the patient lying for two minutes first on the right side, then on the back, and finally on the left side during the operation. This is repeated, and the egecta after each douche are carefully examined and reported upon by the skilled attendant. After the internal douche follows a warm immersion bath of sulphur water. When in the bath a hot douche plays upon the wall of the abdomen from a large nozzle with fine perforations, and is chiefly directed over the site of the colon. This bath not only opens out the peripheral circulation, and thus relieves the congested viscera, but is beneficial to the arthritic and nervous manifestations the result of toxic absorption. Attention on the patien's part to moderate exercises warm clothing. The use of a hot-water bottle to the cold extremities will give the greatest comfort, and by attracting blood from the splanchnic area to the periphery relieve the affected bowel; great care in diet, avoiding all articles of food which may irri-

tate the mucous membrane, must be strictly enforced. It is only left to say that the treatment of chronic constipation and mucous colitis by this method has been most successful, as well as educational to the patient.

Congenital Spastic Paraplegia, with Congenital Optic Atrophy.

Hichens reports the case of a girl aged 6 years who, according to the mother, though backward, was a normal child till she was 3 years old. She was then frightened by a Salvation Army band, and had two convulsions and developed paralysis of the right arm and leg, and paresis of the left leg. The child appears to be slightly microcephalic She has congenital optic atrophy and spastic paraplegia of the right arm and leg, and, to a less extent, of the left leg. Despite the history the case is probably one of congenital spastic paraplegia.—Proceedings of the Royal Society of Medicine.

Gonorrhea and Suppurative Disease of the Uterine Adnexa.

Schottmuller and Barfurth made a careful bacteriological examination of the pus in 79 cases of suppuration in the uterine adnexa. There were found gonococci in 6.3per cent.; streptococci and staphylococci in 17.8 per cent.; miscellaneous organisms in 25.3 per cent.; and anærobic organism in 35 4 per cent. of the cases. The cultures were sterile in 12.2 per cent. of the cases. The authors conclude from these findings, in agreement with Doderlein, that gonorrhea does not play an important role n the production of adnexal suppuration in women. Septic infeetion is a more dominant factor.—Beitrage zur Klinik der Infektionshrankheiten und zur Immunitatsforschung.

Operative Treatment of Epilepsy.—Rauch (Beitrage zur Klinischen Chirurgie) has operated on 22 cases of epilepsy. Of these, 13 were generalized non-traumatic epilepsy, five were non-traumatic Jacksonian epilepsy, and four were generalized epilepsy following trauma. In nine cases of generalized non-traumatic epilepsy the cervical sympathetic nerve was resected, with the result that one case was cured and the remaining cases were not benefited. In 13 cases operation was performed upon the skull; four of these were generalized non-traumatic epilepsy, five were non-traumatic Jacksonian epilepsy, and four were generalized traumatic epilepsy. Of these, one case of non-traumatic epilepsy was cured; two cases of generalized non-traumatic epilepsy, one of non-traumatic Jacksonian epilepsy, and two of generalized traumatic epilepsy were improved. Although the operative results were not brilliant, operative treatment of epilepsy cannot be looked upon as entirely without promise, for in certain cases in which internal therapy has proven a complete failure, cure or improvement can be obtained through operative measures.

Chemotherapy in Carcinoma.

Klotz believes very strongly in the use of Rontgen rays and radium rays for malignant growths, particularly of the female genitalia, but states that much better results will be obtained if other measures are also resorted to. Various chemical substances supposed to have an affinity for tumor cells were tried but the best success was obtained with electro-cobalt injected intravenously in amounts of 5 to 10 Cc. every 7 days. The serum treatment is also very promising. It is a well known fact that the serum of patients suffering from carcinoma contains substances cytolytic to cancer cells. Patients showing improvement with the above methods therefore receive also intravenous injections of the serum obtained from other patients afflicted with cancer so as to increase the cytolysins in their blood. The results obtained with this combined treatment have been very encouraging.—Muench, Med. Woch.

Treatment of Dermatitis Symmetrica Dysmenorrheica.

According to Matzenauer and Polland, dermatitis symmetrica dysennorrheica is a dermatosis characterized by peculiar, spontaneous inflammatory lesions, usually occurring in symmetrical areas and apt to relapse. In appearance, the lesions may suggest erythema, urticarial edema, more commonly a moist dermatitis and more rarely a spontaneous necrosis of the skin. Frequently, there are also vasomotor disturbances on part of the circulatory organs and the heart and often psychic disturbances. These lesions are found in women suffering from dysmennorrhea and are probably due to a general intoxication owing to inactivity of the follicular tissue of the ovaries. In the most chronic case which also exhibited the most severe and numerous lesions, ovaraden-triferrin was prescribed. After several months, the menses reappeared and the lesions vanished. In a second case still under treatment the menses have not yet reappeared and the skin lesions have persisted.—Archiv. f. Dermat. u. Syphilis, 1912, No. 2.

Treatment of Severe Sepsis

In one case of acute sepsis starting from a streptococcus tonsillitis H. Bennecke in-

jected antistreptococcus serum and collargol solution in the usual dose without the slightest effect. Blood culture showed the presence of streptococci in large numbers. The patient failed rapidly and developed a systolic murmur at the apex so that she was given up as lost. Finally, 400 Cc. of blood were withdrawn and immediately after, 420 Cc. of normal serum were injected into the vein, obtained from 5 healthy individuals. The patient's temperature dropped at once and reached the normal level on the following day. The patient made a rapid and uneventful recovery. All in all, 5 cases were treated in this way and of these, 3 recovered. The object of the procedure is to remove toxins from the system and introduce new antibodies. The most apparent effect is the almost immediate improvement in the appearance of the blood and the general stimulation of the circulation.—Muench Med. Woch.

Abortive Treatment of Syphilis.

In every case of venereal ulcer, Zurn carefully examines the scrapings for spirocheta pallida and if the results are positive, begins with energetic treatment without waiting for secondary symptoms or a positive Wassermann. The treatment consists of excision of the local sore and the use of mercury and salvarsan, either alone or in combination. The abortive treatment will be successful, if the secondary symptoms do not appear and the sero-reaction does not become positive. The latter should be done every 2 or 3 months and must remain negative at least one year after treatment is concluded. Among 53 cases observed 34 were in all probability aborted. It is very difficult to determine how much treatment will be necessary to effect a cure, but in some of the cases quoted, 2 injections of calomel a 0.05 and 0.1 Gm. with 3 injections of salvarsan a 0.5, 0.5, 0.4 Gm. were sufficient, while others received only 6 calomel injections. Wherever possible, preference is always to be given to the combined treatment.—Berl. klin Woch.

Danger Due to Substitution.

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This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

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Thiosinamin in Keloid and Dupuytren's Contraction.—Tubby (British Med. our) has employed thiosinamin treatment with success in cases of keloid and of Dupuytren's contraction. With a fine tenotomy knife a large number of multiple incisions are made transversely to the bands of keloid material. No attempt is made to arrest haemorrhage except by pressure, and when the bleeding has ceased a solution of thiosinamin is vigorously rubbed in; when the scar tissue is thick, a few drops may be injected into the most prominent bands. He injects 15 minims at a time in children, and 20 minims in adults. In one case (a patient over 60) some cardiac collapse was noted, but in other cases there were no untoward symptoms. The treatment may have to be repeated twice or three times at intervals of fourteen days.

Peirol as a Therapeutic Agent.

Stephens (Dublin Jour. Med. Sc.) has used petrol or gasoline in the following: As a scalp cleanser in excessive dandruff, in alopecia areata, pediculi capitis, wounds of the scalp for removing surgical "dirt," pustular eruptions of the beard, barbers' rash, scabies, cracked nipples, soft corns, burns of all kinds, in operations, before incision for cleansing skin, after stitches, then a dry dressing. It should never be handled near a light or fire.

Prevention of Loss of Life at Sea.—At the recent International Congress on First Aid and Ambulance Work, held in Vienna, the prevention of loss of life in sea voyages was discussed in a paper by Professor Flamm, who said that water-tight compartments should be constructed in the long axis as well as in the cross section of a modern ship, the stability of the vessel being of paramount importance. The number and capacity of the life-boats should be in direct relation to the number of persons on board the ship, and not to the tonnage of the vessel. A modern passenger steamer must have apparatus for wireless telegraphy must be carefully ballasted by proper storing of the cargo and trimming of the fuel, and must have the fuel stored in fireproof compartments. Medical aid must be provided for each 300 or 500 souls, one medical man and a ship's hospital or ward, with at least six beds, being available. Cork belts must be within easy reach in the berths and on deck.—The London Lancet.

A New Test for Arteriosclerosis.—Hertzell (Berl. Klin. Wochenschr.) mentions the case of a patient who was made to lie quietly in bed and, by means of pneumatic cuffs such a sare used in sphygmomanometry, the circulation is completely shut off in one arm and both legs. This is invariably followed by a rise in blood-pressure as registered in the free arm. Normally, this rise in arterial pressure is in the neighborhood of 5 mm. Hg. In cases of arteriosclerosis, however, the rise may amount to 60 mm. or more. The explanation of this abnormal rise may be found in the fact that one of the first results of arteriosclerosis is the loss on the part of the arteries of the power to dilate promptly when external causes bring about an increase of the peripheral resistance. The result under these circumstances must be a sharp rise of the blood-pressure. The writer believes that whenever this reaction is positive, we may infer a pathological change in the arteries in the direction of greater rigidity. Such patients should be very carefully handled, especially when we have occasion to use hydro-therapeutic procedures.

Pneumonia.—Leo (Mun. Med. Woch.) experimenting on mice against pneumococcus infection by subcutaneous injections of a saturated aqueous solution of camphor, found that they were protected against infection; in rabbits the results were not so constant. These experiments suggest that camphor should be given from the onset of symptoms in pneumonia. The Doctor suggests about 150 to 200 c.c. for a weight of 145 pounds; and he prefers Ringer's fluid to plain water as the vehicle. Seventy-five c.c., corresponding to 0.1 gm. camphor, can be injected intravenously without disturbance. This is supported by Lenzman, who is shortly to publish his experience in this line. Boehncke has already reported favorably on camphor plus pneumococcus serum.

Pulmonary Tuberculosis.—Alexander (Med. Klin.) since 1889 has advocated systematic injections of camphor in pulmonary tuberculosis to sustain the heart. The dose is 0.1 gm., repeated every day for a month, then dropping to 0 03 or 0 05 gm., keeping this up for months without interruption. Even with a tendency to hemoptysis this answers without morphine. No drugs are required in the first stage of tuberculosis, but where fever keeps up and there is a tendency to hemoptysis and emaciation camphor benefits in every case, no matter how far the case is advanced.

Dermatitis Due to Plaster of Paris.—Whitfield (British Jour. Dental Science) says that a dental surgeon consulted the author about an irritable eczema of the hands chiefly confined to the thumb and fingers. On inquiry it was found that the patient had been working a good deal with plaster of Paris, takin gcasts of the mouth. The attacks were always consecutive to the contact with this material, and the disease was easily cured by removing the cause and dressing the hands with suitable applications. The type of eczema was exactly similar to that among workers in cement. The skin wa sonly moderately reddened; there was a considerable breaking up of the horny layer, with a tendency to form fissures where the skin was folded into creases; a few attempts at vesicle formation were seen in the more acute chemical poisonings of the skin such as are produced by biniodide of mercury lotion..

Table of Contents for March, 1914.

Original Communications.

Tri-State Medical Association; President's Address, by Southgate Leigh, M.D., Norfolk, Va., ... 145
Gastrostomy: Report of a Case, by Henry Norris, M.D., Rutherfordton, N.C. 148
Empyema, with Report of Three Cases in the Same Family at the Same Time, by Foy Roberson, M.D., Durham, N. C., ... 149
Diagnosis and Treatment of Genito-Urinary Lithiasis, by D. Y. Keith, M.D., Louisville, Ky., ... 151
Tubercular Kidney, by R. L. Payne, M.D., Norfolk, Virginia..... 153
Uses and Abuses of Forceps, by Dr. Stanley Matthews, Bunkie, La., ... 156
The Importance of the Eye to the General Practitioner, by W. S. Hodnett, M.D., Danville, Virginia. 157
The Thyroid Pituitary Gland in Obstetrics, by B. U. Brooks, M.D., West Durham, N. C., ... 158
Chronic Constipation Caused by Sigmoid Invagination, by Drs. D. W. and Ernest S. Bulluck, Wilmington, N. C., ... 159
The New Mental Healing, by Jas. K. Hall, M.D., Richmond, Va., ... 161

Editorial.

Antipyretics, ... 165
Mediastinitis, ... 165
The High Incision in Abdominal Cæsarian Section, 166
Sixteenth Annual Session Tri-State Medical Association, ... 166
Recurrence of Breast Cancer Through the Deep Fascia, ... 167

Book Notices.

Tuberculin Treatment, by Clive Riviere, M.D., ... 170
When to Send for a Doctor and What to do Before the Doctor Comes, by Frieda E. Lippert, M.D., ... 170
Leaders in Homeopathic Therapeutics, by E. B. Nash, M.D., ... 171
A Manual of Venereal Diseases, by Sir Alfred Keogh. 171
Elements of Homeopathic Theory, etc., by Drs. F. A. Boericke and E. P. Anshutz, ... 171

Abstracts.

The Use of Pituitary Extract in Obstetrics, ... 172
Veronal Poisoning, ... 172
Thrombosis, ... 172
Discussion on Urinary Antiseptics, ... 173
An Epidemic of Specific Parotitis in School Children, ... 173
Influenzal Meningitis, ... 174
Treatment of Burns by the Application of Alcohol, .. 174
Treatment of Furunculosis, 175
Case of Osteogenesis Imperfecta, ... 175
The Diagnosis of Extra-Uterine Pregnancy, ... 175
A Case of Myxo-Sarcoma of the Lung Involving the Heart, ... 177
The Pancreatic Secretion, 178
Congenital Chondrodystrophy, ... 179
Ovulation, Corpus Luteum and Menstruation, ... 179
The Experimental Production of Pernicious Anæmia in Rabbits, ... 180
Roentgen Rays in Skin Diseases, ... 180
Case of an Unusually Large Tumor of the Child Complicating Delivery, ... 180
Pathology and Therapy of Renal Calculus, ... 181
Pathology of the Adrenals, 181
Mistakes in Diagnosis of Juxta-Pyloric and Duodenal Ulcer, ... 181
Treatment of Acute Abdominal Cases in Children, 181
Absence of Corpus Callosum 182
The Treatment of Neuritis with Strychnine, ... 182
Medication Through a Tracheal Fistula, ... 182
The Treatment of Acute Pleuritic Empyema, ... 183
The Combined Action of Medicaments in Cardiac and Renal Dropsy, ... 183
A New Test for Arteriosclerosis, ... 183
Dermatitis Due to Plaster of Paris, ... 183
Facial Paralysis Following Neosalvarsan Injection, .. 183
Thiosinamin in Keloid and Dupuytren's Contraction, 184
Paralysis Agitans and the Ductless Glands, ... 184
A Case of Salvarsan Poisoning, ... 184
The Use and Abuse of Tuberculin, ... 185
Amino-Acids and Sugars in Rectal Feeding, ... 185
The Treatment of Umbilical Hernia in Children by the Subcutaneous Elastic Ligature, ... 186
The Ductless Glands and the Nervous System, ... 186
Ringworm Treated by X-Rays, ... 187
Oxycephy, ... 188
Portals of Tuberculous Infection in Children in the First Year of Life, ... 188

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The Treatment of Infections by Means of Fixation Abscesses.—Dr. de Lostalot, in The London Lancet, is trying to revive a method invented by Fochier more than 30 years ago. He says that those who have tried it are convinced it is of great value.

"The cases in which it may usually be employed are the following: Puerperal septicemia, infectious pseudo-rheumatism, pneumonia, appendicitis, typhoid fever, and similar conditions.

The method of forming a 'fixation abscess' is as follows: Two cubic centimeters of pure essence of turpentine are injected under the skin in the gluteal region. In a case of appendicitis it is important to keep as far away from the abdominal wall as possible in case an operation may become necessary later. It is hardly necessary to say that the most rigorous asepsis must be employed in making the injection. A sharp pain will follow at once, but this may be immediately relieved by the application of a hot fomentation. At the end of three days, or four at the most, the abscess will have formed sufficiently. There is no need of a large collection of pus for the production of a phagocytosis. I have often noticed a lowering of the temperature before the formation of the abscess. A small incision, from 2 to 5 centimeters in length, should then be made to evacuate the pus, but the abscess must not be drained, and twice a day a Bier's cup should be applied. At the end of a week the abscess will be healed and the patient will be cured.

As to its mode of action it has been suggested by M. J. Carles, of Bordeaux, that as the pus in a fixation abscess is sterile, for it contains only dead microbes, the abscess attracts micro-organisms from the blood, and that they are killed when they arrive there, though it is certain that in some cases living germs are to be found in a 'fixation abscess.' As the mode of action is up to the present by no means certain it is best perhaps to acknowledge that the method is really empirical, though of great value.

I am very anxious to extend more widely the use of this method of treatment, and therefore in this paper I am giving an account of the procedure and the conditions in which it is likely to be of use. Certain complications have been attributed to this method, such as pain, separation of the skin, and secondary infection of the abscess, but these when they occur are really due to the mode in which the treatment is applied and not to the method itself, for if the treatment is properly carried out they do not occur. It is of the greatest importance that time should not be lost in trying other methods before employing this; it is far better to form a 'fixation abscess' and then the other methods can be used as well."

Roentgen Therapy of Tuberculous Lymphatic Glands.—Philipowicz (Wien. klin. Woch.) believes that the Roentgen treatment of tuberculous glands rarely fails if a correct technic be employed. Of 26 cases treated in this manner, 22 were later examined and three reported by letter, and in all of these the results were satisfactory, the lymphomata having completely disappeared or having been greatly reduced in size. Fistulæ rapidly closed, scrofuloderma healed, and in some instances there was a gain in weight. This was accomplished in spite of the fact that only four of the patients submitted to the treatment for a sufficient length of time. Both the hyperplastic indurated glands and those in which softening had already occurred responded equally well to the rays. Ordinarily after three to five applications a reduction in the size of the lymphomata and a closure of fistulæ was observed. To obtain a complete cure, however, an average of fifteen sittings is required, which corresponds to four or five months' treatment. This method is not adapted for patients under ten years of age, owing to the possibility of disturbances of growth, and in the presence of marked anemia or phthisis small doses should be cautiously employed. The advantages of Roentgen therapy are the rapid and certain recedence of glandular swellings, the fine scars following the closure of fistulæ, the favorable influence upon the general condition, and the avoidance of any subjective disturbances.

Duodenal Ulcer.—Schutz (Wien. klin. Woch.) states that the ratio of frequency between duodenal and gastric ulcer is one to two. In 87 per cent. of his cases the patients were males, the vast majority being below sixty years of age. As regards the symptomatology, he coincides with Mopnihan. In discussing the operative treatment, he is not strongly impressed with the value of gastroenterostomy, and is inclined to believe that unilateral exclusion of the pylorus may prove the better procedure. In his opinion, however, many cases may be cured without operation. The internal treatment differs from that of gastric ulcer in that the patient receives frequent small meals of solid food (at intervals of about three hours) and also large doses of alkalies in combination with belladonna, this medication being continued after the cessation of the attacks. Sometimes the rest cure and dietary suggested by Leube with frequent administration of small amounts of milk best answer the purpose.

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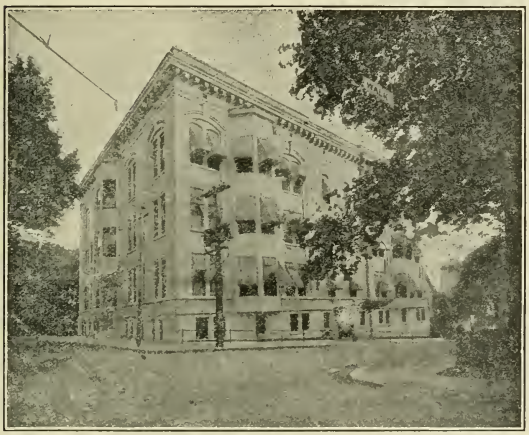

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Complete Congenital Absence of Both Radii.

Robson and N. B. Odgers report the case of a boy aged 6 years, who has had "club" hands since birth. Both hands are kept in the extreme varus position, but, since an operation three years ago, can be straightened with a splint. An x-ray photograph shows complete absence of both radii — Proceedings of the Royal Society of Medicine.

Treatment of Exophthalmic Goitre by X-Rays.

Bruce presents an analysis of eighteen cases of exophthalmic goiter which had been treated at Charing Cross Hospital since 1905. Six of the eighteen did not appear for re-examination, and one had died, in which case only three exposures had been given when diphtheria supervened. The remaining twelve were examined three months ago, and they had been divided into three categories: (1) cured; (2) greatly improved; (3) improved. Four were cured; the exophthalmos and goiter had gone, and no symptoms remained. Five—of which one had been operated upon—were greatly improved. Three had improved, and one of these also had been operated upon, two still remaining under treatment. The exophthalmos disappeared in four cases, was slight in three, and marked in five, two being still under treatment. The skin was normal in seven cases, and there was slight telangiectasis in four, and marked telangiectasis in one. These latter were the author's earliest cases, and the number of exposures given was much greater than had been since found to suffice. All the patients expressed themselves as much better, and they stated that their weight had increased. In none of the patients was there any sign of myxedema; and that was of interest, since in a case the author recorded some years ago, in which he thought myxedema had developed, the patient got very fat at the latter end of the treatment, which lasted two years, and the hair over her forehead began to fall. Three months ago her appearance was normal, no sign of myxedema being noted. All the author's cases were treated with the x-ray tube at a distance of 18 to 12 inches from the skin, the surrounding part being screened off by a 4-inch thickness of felt. They had attended either two or three times a week for periods varying up to two years. The effect of the treatment was wonderfully good. But the author had always tried to have in mind the fact that cases of exophthalmic goiter had been known to recover without any treatment whatever, so that one must somewhat discount the value of the x-ray treatment on that account.—Proceedings of the Royal Society of Medicine.

The Diagnosis of Tuberculous Bronchial and Mediastinal Glands.

Elliott gives an account of the literature on this subject, and then discusses the anatomy, pathology, symptoms and signs. No extensive studies have been made in Canada as to the extent of tuberculosis in children, but it is generally conceded that all children who are tuberculous have tubercular bronchial glands. Rupture of a caseating gland into a vein accounts for miliary spread—in all cases of meningeal and generalized tuberculosis, caseating bronchial glands are found. The pressure symptoms from enlarged glands on the vagus, on its recurrent laryngeal branch, and, on the sympathetic, as well as on the bronch, are fully described. Diagnosis is very materially assisted by means of the x-rays and the tuberculin reaction.—Medical Journal of South Africa.

Phagocytic Power of Eosinophile Leucocytes.

Manceaux has recently reported at the Societe de Biologie that he has observed the eosinophile leucocptes of a pleuritic exudate engulf and digest red blood cells. The phagocytic power of eosinophile leucocytes has already been demonstrated by Weinberg in vitro.—La Presse Medicale.

Iodine Applications in Diphtheria.—Thomas (British Medical Journal) has used iodine ointment in 30 cases of diphtheria and 19 of scarlet fever, and in 10 other cases of septic throat of various origin and degree. The result has been very satisfactory, one of the great advantages being that the treatment is not unpleasant to the patient—an important point in the treatment of young children. He uses three cotton-wool mops, two to remove secretions and false membrane and to dry the surface as far as possible; the third, well smeared with the ointment, is thoroughly rubbed on the affected surface and its surrounding area. This is done every three hours, or in severe cases every two hours, until improvement occurs. Under this treatment many cases of diphtheria clear up within a few hours, becoming quite free from false membrane on the second or third day. The septic cases, and those due to specific disease, also promptly recovered, and the scarlet fever cases were remarkably free from local complications.

Mixed Vaccines Against Typhoid and Paratyphoid Fever.—Castellani (Indian Medical Gazette) says that in countries where, besides typhoid, there occur para-

typhoid A and paratyphoid B, a mixed vaccine should, in the author's opinion, be used. This has been done in Ceylon for the last five years with good results. The mixed vaccines used are either dead vaccines, the cultures being killed in the usual way by heating at 52° C. (127.4° F.), or live attenuated vaccines, prepared by heating the cultures at 50° C. (122° F.) for an hour. On account of the general objection to the use of live vaccines, the author recommends the former variety for routine use. His mixed vaccine contains per c.c. 500 millions typhoid, and 250 millions each paratyphoid A and B. It is prepared either from broth cultures or from emulsions in physiological salt solution, and 0.2 per cent. lysol is added. The intial dose is 0.6 c.c. (10 minims); this is doubled for the second and third dose, which are given respectively 7 and 14 days later. In some cases the doses are reduced to 0.5, 1.0, and 1.0 c.c. Such vaccination induces a production of agglutinins for all three gorms, and has been found to be innocuous, add to produce an immunity losting for from one to two years.

Adrenaline and the Blood Pressure.—Watson (Practitioner, London) says that experiments were carried out to ascertain the effect of hypodermic injections of adrenaline on the blood pressure. Ten minims of adrenaline solution (1:1000) was the quantity used on each occasion. The effect in all the experiments was to decrease the diastolic pressure more than it raised the systolic; and the persistence of the diastolic fall was generally greater than the persistence of the systolic elevation. Palpitation, tremulousness, and faintness were generally experienced after the injection. Adrenaline has been proved to cause contraction of the peripheral vessels; the great depression of the diastolic pressure which it produces cannot therefore be due to a diminished peripheral resistance; hence it would seem that it must be accounted for by some freedom of outflow at the aortic orifice for the blood in the arteries. The author points out that the condition of systolic and diastolic pressure observed in his experiments resembles that commonly found in aortic regurgitation, and this suggested to him that one of the physiological actions of adrenaline in man might be to dilate the aortic orifice, and produce a temporary regurgitation. He suggests that this may explain the cause of the sudden collapse or death which has occasionally followed the injection of the drug into patients anæsthetized with chloroform.

Salicylic Ionization in Acute Pericarditis.—Mackintosh (British Medical Journal) reports a case in which it was used with success in acute oericarditis.

A thin, delicate girl 18 years of age, developed acute rheumatism after an attack of quinsy, and in its course acute pericarditis set in. The pain was severe, the patient spending the whole of one night in a position of complete orthopnea and being almost without sleep. The next day salicylic ionization was tried, the active electrode, in the form of a pad soaked in a 2 per cent. solution of sodium salicylate, being placed over the precordium, while the indifferent electrode was placed on the back. A current of 40 milliamperes was used, and it had not run many minutes before the patient declared herself eased. At the end of the session (about half an hour) the patient laid back on her pillow and fell into a sound sleep. The ionization was repeated on subsequent days, and the symptoms of pericarditis gradually subsided. Acetosalicylic acid was also being taken by the mouth.

It is difficult to believe, the author states, that the great and rapid relief afforded in this case was due merely to tissue-ionization by the galvanic current or to any moral effect. The patient was a favorable subject for the treatment, the thinness of her chest-wall offering a reasonable expectation that the salicylic ions could be made to penetrate to the requisite depth.

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Spinal Anesthesia by Tropacocaine.

In the Ingleby Lecture delivered by Professor T. J. Morrison at the University of Birmingham, a very favorable account is given of the method of inducing anesthesia by means of injection of tropacocaine into the spinal canal. The account is based on a series of nearly 1,300 cases in which this procedure was employed, the patients being of all ages, from 11 months to over 70 years. The drug is administered in 5 per cent. solution in normal saline fluid, and 1 grain forms an average dose for an adult, After the preliminary puncture is made 2 or 3 c.c. of the cerebro-spinal fluid are allowed to escape in order to delay absorption and to avoid increase of pressure in the canal. When the drug is administered the patient is first conscious of a sensation of warmth, followed by tingling and numbness, in the feet. Soon anesthesia is complete and is accompanied by inability to move the legs and by loss of knee-jerks; the abdominal muscles are relaxed. The mental condition of the patient is generally calm, and abdominal pain, if present, is relieved. Anesthesia lasts for 30 to 90 minutes. Owing to blocking of afferent channels surgical shock is avoided, and after the operation there is little sickness, and food can be given almost immediately. The only drawbacks noted during anesthesia were occasional pallor and tendency to syncope, easily treated by stimulants, and after the anesthetic effects of the drug had passed off there were sometimes headache and backache of no great severity. In a few instances a trace of albumin appeared in the urine, owing apparently to some toxic action of tropacocaine on protoplasm, but no lasting ill effects on the kidneys were seen. In this series of cases no death directly attributable to the anesthetic occurred, the only fatality in which possible blame might have been attached to the drug being in an exhausted patient the subject of old calculus pyelitis, in whom a general anesthetic would have been inadmissible, and who died after being taken back to bed, 50 minutes after the injection. In two cases, both subjects of jaundice, temporary respiratory failure occurred on the operating table, but passed off under the usual measures of treatment. Satisfactory anesthesia is obtained by spinal injections over all the region below the diaphragm. It is not advisable to attempt to obtain a higher distribution by making the injection high up in the cord, as some risk is thus probably run. Cases especially suitable for this form of anesthesia are those in which there is respiratory trouble, such as bronchitis, or some grave condition of toxemia, such as uremia or diabetes. Cardiac cases and chronic alcoholic subjects are also better treated by injection than by a respiratory anesthetic, and emergency operations may be done by this means on persons who have recently taken food. A few days in bed should be enjoined after the procedure, which is therefore unsuitable for ambulatory use, and it may be barred by local septic troubles in the neighborhood of the seat of injection or by disease of the central nervous system. In some cases it is well to administer a small dose of morphine or some similar drug previously, or a general anesthetic may be combined with the spinal injection, being given either before or after the latter; for example, in the few cases in which for any reason the local anesthetic fails to act. The author emphasizes the value of the method as facilitating the work of the surgeon in the absence of a qualified anesthetist, and holds that it should be taught in all medical schools as an alternative to the usual methods.—Birmingham (England) Medical Review.

Gold-Potassium Cyanide in Syphilis.

Grunberg has tried the new preparation, gold and potassium cyanide, recommended for syphilis, and reports as follows: A 1 per cent. stock solution was diluted with 50 c.c. freshly distilled water, as many c.c. being used as it was desired to inject centigrams. The initial dose was 0.01 which was carefully increased up to 0.03 0.05. The drug was injected in this way intravenously every third or fourth day. The total amount injected was 0.19 to 0.21. Local irritation or after-effects were not seen except slight intestinal disturbances. An undoubted impression was made upon the disease, particularly in case of the primary sore or gummata so that the drug must be regarded as a valuable adjuvant in the treatment of syphilis. L. Hauck has also tested the drug very carefully, particularly in lupus, and has also seen excellent results. Inasmuch, however, as he has seen one fatal intoxication, he warns against the use of doses commonly recommended. Even doses of 0.02 Gm. act as blood-poison and cause destruction of both red and white cells. The case mentioned had received 0.34 Gm. within 33 days, in 10 intravenous doses, varying between 0.02 and 0.04 Gm. each. On the day before death, the hemaglobin was 55 per cent., the reds 3,330,000 and the whites 950 and a hemolytic jaundice was very evident. The author thinks it is doubtful if doses small enough to be safe will be therapeutically sufficiently active, unless combined with tuberculin.—Muench. Med. Woch.

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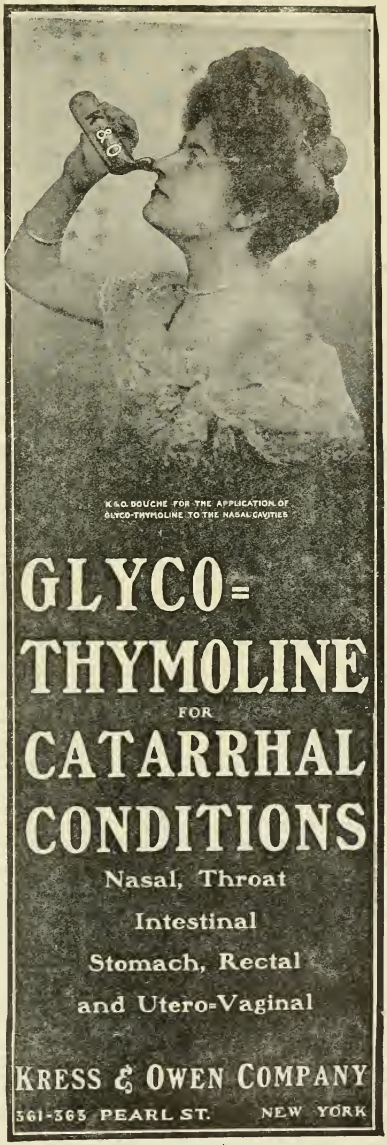
Duodenal Diverticula.—Wilkie (Edinburgh Medical Journal) concludes: 1. Diverticula of the second and third parts of the duodenum are of congenital origin. 2. In the first part of the duodenum three types of diverticula are met with, the congenital, the ulcer diverticulum, and the acquired wide-mouthed diuerticulum of the duodenal vestibule. 3. Congenital duplicature of the duodenal wall may occur either along with or independently of diverticula; it is probably due to the persistence of a condition normally found at an early period of fœtal life, and is in fact but a mild degree of that arrest of development which in its most pronounced form is met with in cases of congenital atresia of the duodenum.

Ocular Complications of Measles.—Griscom (British Medical Journal) states that although the acute catarrhal conjunctivitis, which is usually associated with these cases, is productive of no real injury, a streptococcal infection is most dangerous and may end in rapid sloughing of the cornea. Apart from their association with conjunctivitis, corneal ulcers are rarely seen in measles.

Trautas (Constantinople) describes a superficial punctate keratitis which he states is present in 85 per cent. of all cases; he is inclined to regard it as a pathognomonic sign rather than as a complication of measles. It begins on the third, fourth or fifth day of the disease and takes the form of a slight cloudiness of the cornea, with numerous superficial whitish spots, visible with a loupe. The condition usually affects both eyes and may not be associated with any symptom of irritation.

Dr. Griscom found only 23 cases reported



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of blindness due to optic neuritis after measles, and, from his analysis, is not yet able to arrive at any definite conclusion as to the cause of so grave a complication. He believes the condition in many cases to be the result of an edematous swelling in the optic nerve and sheath caused by irritating toxins circulating in the blood and lymph streams, rather than a true inflammatory neuritis with deposition of a sero-fibrinous exudate between the nerve fibres and a consequent shrinking with atrophy.

Other believers are of the opinion that the swelling of the nerves is secondary to an acute sinusitis, associated with the general "cold in the head" so constantly affecting the mucous surfaces in measles. Many of these cases reported did not present any evidences of meningitis or ocular-motor derangement.

Dispensary Treatment of Chorea.—Arthur Newlin (Arch. of Pediatrics) treated 75 cases of chorea at his out-patient clinic in 12 months. These, all cases of true chorea minor, were treated as out-patients (1) on account of lack of room in the wards, (2) by their own decision, (3) because of the mildness of their symptoms. The routine treatment was as follows: (1) Modification of the diet—tea, coffee, cakes, and sweets were excluded. Meals must be at regular intervals, and well masticated. Milk was included in all cases. (2) All cases rest in bed in a well ventilated room. Keep in bed for six days; allow up on the sixth day for one hour, and return to the dispensary on the seventh day. With decided improvement rest in bed till noon for the second week, followed by two or three hours' rest on a sofa during the third week according to progress. Where no improvement occurs the first week, the same routine is carried out the second week. To allow of complete physical and mental rest any condition that might act as a nervous irritant, viz., ocular defects, adenoids, carious teeth, phimosis, thread-worms, etc., should be treated. Tuberculosis and syphilis must always be sought for in chorea. (3) Iron is essential, whether the child is anæmic or not.

Blood and Cerebro-Spinal Fluid in Mumps.—Feiling (Lancet). Blood examination was made usually while the disease was at its height between the third and eighth days. At first the red cells were counted, but as no alteration occurred in 12 cases, this was discontinued. In every case the total number of leucocytes was enumerated, and a differential count made. Two cases of orchitis occurred. Three cases of parotitis, due to other causes (septic and post operative) were also examined as controls. From a total of 40 cases the author codcludes that: (1) The blood in mumps shows definite changes in the corpuscular content; (2) these changes consist (a) in a slight increase in the total number of leucocytes, and (b) in a lymphocytosis, which is both relative and absolute; (3) this lymphocytosis is present on the first day of the disease, and persists for at least fourteen days; (4) the occurrence of orchitis does not invariably alter the blood picture (as affirmed by most other writers; and (5) the changes in the blood are of distinct diagnostic value in differentiating mumps from other inflammatory swellings of the parotid or submaxillary salivary glands, and from cases of lymphadenitis. With regard to the cerebro spinal fluid in cases of mumps complicated by meningitis, or even without any meningeal symptoms whatever, the author finds from the literature and from the study of a case presenting the clinical signs and symptoms of meningitis: (1) That a lymphocytosis of that fluid occurs when the disease is complicated by meningitis or by lesions affecting the cranial nerves; (2) that a lymphocytosis has been found in cases of mumps which have presented no clear clinical symptoms of any organic lesion of the nervous system. Finally from a consideration of the changes found in the blood and cerebro-spinal fluid the assumption is justified that the virus of mumps excites an inflammatory reaction in the body, whose characteristic feature is a great aggregation of lymphocytes.

Appendicitis in Children.—Simpson (British Journal of Children's Diseases) says most authorities are agreed that appendicitis is much more common in children than formerly, the general opinion being that the cases are not only increasing in frequency, but also in severity. In earlier days cases were treated with fomentations, till the abscess pointed; while, in spite of the present treatment by early operation, the mortality has increased considerably. Thirty cases of acute appendicitis under 14 years of age are reported in the series. Of these fæcal concretions were found in eighteen, oxyuris in one; while in the remaining cases the appendix was not removed, or had already ruptured, so that the absence of concretions in these could not be affirmed. In only three was the mischief confined to the appendix; in only five was there a definite localized abscess, though in seven more there was some attempt at localization. General peritonitis was present in thirteen cases, and in nine others there was spreading peritonitis still confined to the iliac fossa. There were five deaths, though most of these cases were practically hope-

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less when first seen. Severe abdominal pain, vomiting and pyrexia, were present in nearly all; together with marked tenderness and rigidity of the abdomen, and diminished mobility. The appendices varied in length from eight inches to less than one inch. In a large number of cases the organ

lay in a high position; in one the cæcum lay close to the gall-bladder, and was so twisted that the base of the appendix lay at the apex of the gall-bladder. This high position can often be diagnosed from the position of the tumor, or abdominal resistance. No long search should be made for the appendix in suppurative cases, for rapidity of operation is of the utmost importance, and simple drainage is the better procedure if the appendix is difficult to isolate or find. Ether is the anæsthetic of preference, but where there is acetonuria or advanced peritonitis, local or spinal anæsthesia offers more hope of a favorable result. The Fowler's position and saline infusions are chiefly to be depended on in the after treatment, with injections of strychnine and pituitary extract. Feeding must be commenced early, especially in the younger children.

On the Use of Pituitary Extract in Obstetrics.—Harrison, in The Canadian Practitioner and Review, says that although the first use of pituitary in obstetrical practice was made in England, but few papers dealing with its action have been published in English, while in Europe it has been so extensively used that a study of the large number of papers and cases now published enables one to formulate, with considerable precision, rules for its employment. This is especially true after one has given it, with success and failure, in one's own experience. This forms the justification for this paper.

In 1895, Oliver and Schaefer, in their series of experiments with organ extracts, followed up their papers on the striking effects produced by the injection of extracts of the adrenal by showing that extracts of the pituitary also produced a rise in blood-pressure. In 1898, Howell showed that it was the posterior lobe which possessed this property. This was confirmed by Schaefer and Vincent, and in 1901 Schaefer and Magnus showed that the extract of the infundibular portion increased very markedly the flow of urine. At this point the matter rested until 1906, when Dale, in the course of some observations on the action of ergot, noted that the extract of pituitary brought about a marked contraction. This observation, however, was entirely lost sight of until Blair Bell and Hicks, led by some experiments which they had on hand, obtained from Dale some pituitary extract and produced with it marked contractions of the uterus in pregnant rabbits.

In consequence of the result obtained, Blair Bell was led to use it in some obstetrical cases. He presented his observations before the Liverpool Medical Institution, November, 1909, and his paper was published in December. In it he refers to its use in two cases of post-partum hemorrhage, and one case in which it was used in the expulsive stage of labor. In September, 1910, Aarons of Edinburgh read a paper at the International Congress in St. Petersburg, in which he reported success in its use in six cases of post-partum hemorrhage.

Hahl and Malinowsky have recorded the variations in intrauterine pressure with a bag, after the method of Westermarck, and in two cases reported by Hahl, there was some rise in tone, the movements being shorter and stronger, at shorter intervals and with increased intrauterine pressure; and Malinowsky shows a good tracing of a uterine tetanus. In other cases no increase in tone occurred, but only of movements. Such tetani are not uncommon with ergot preparations, but apparently much less so with pituitary. Cases have, however, occurred. In one of the cases published by Rieck a tetanus evidently occurred, and is very well described by him. When it took place after the second injection, which was given six hours after the first injection, the patient stated that she felt the individual pains, but the examining hand could detect no contractions or relaxations.

Lieven also reports a case in which the uterine tetanus was so marked that the child's heart-rate fell steadily to 82, and there was a marked passage of meconium. Spaeth reports a similar case. He was, however, so unfortunate as to see the child die. Seitz and Roemer have each stated that they have also seen tetanus occur. Hamm, too, in one case which was brought to him after the child was dead and the patient had been in labor for a considerable period of time, injected pituitary, and regular movements set in. These, however, died away, and a second injection was given, which was followed in seven minutes by a tetanic constriction which lasted eight minutes, then regular movements for one or two hours, which gradually died away. A third injection produced another tetanus of eleven minutes' duration, then regular movements; and the fourth, tetanus of seventeen minutes, followed by regular movements, which led to delivery. He states that he has frequently seen the fœtal heart-rate fall to 80; but in view of the rapidity of delivery in most cases, does not consider this dangerous. The above incident shows quite clearly, however, that the use of pituitary is not without some danger to the child, though danger to the mother seems very slight. In consequence, the fœtal heart sounds should be, if it is at all possible, kept constantly under observation. This danger seems undoubtedly greatest

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The Association of Some Forms of Mental Disease and Inebriety.*

By W. C. Ashworth, M.D., Greensboro, N. C.

In presenting my subject before the Society I am actuated by a conviction which has been increasing during some years of observation, namely, that there is a class of patients who have become addicted to various forms of dissipation, and in whom the cause for such habits is to be found in morbid, nervous and mental conditions. It is then, from the viewpoint of the alienist, rather than from that of the specialist in treatment of drug addictions, that I invite your attention today. Although from time immemorial inebriety has been recognized as a causal factor in many forms of mental and nervous psychoses. I think I may assert that the opposite point of view that many of our inebriates are such because they are primarily victims of these various psychoses, has until recently been less certainly admitted.

Those most familiar with the inebriate as seen in our various institutions, whether insane hospitals, almshouses or sanitariums, however, are cognizant of the fact that in very many cases, possibly a large proportion of them, inebriety is merely a baneful graft on antecedent psychopathic or neuropathic states and that the syndrome is to be considered as the result of these conditions rather than an independent phenomenon.

Some authority has said that insanity is a mental disorder of greater importance to the individual than any other affliction that can befall him. It changes his relation to the world about him; it alters or destroys his ability to understand himself and creates a fictitious personality; it sets a false standard of values in which the sense of proportion is warped or lost. And not only does it afflict the individual, it creates as well burdens which must fall on those in relationship with him.

By destroying judgment, by loss of willpower it renders the man incapable of caring for his family; it is responsible for excesses of many sorts and even for crime. And if at first the burdens lie most heavily on the individual, they must later fall on the family or even the community, and the load may become a grievous one. It is apparent then that prompt recognition of the condition and realization of the inability of the sufferer to act for his best good, together with comprehension of the fact that early insight into the matter may mitigate the after-course of the disease and even effect a cure, that early recognition of any departure from the normal becomes important.

It is not my intention, nor does it lie within the scope of this paper, to go exhaustively into any definition of the term insanity. Unfortunately we have none acceptable to all students of psychiatry and we find nearly as many definitions as authorities. It is said that the eminent jurist, Lord Blackburn, testifying before the House of Commons, said: "I have read every definition I could meet with and have never been satisfied with any. I have endeavored in vain to make one for myself," concluding with the remark, "I verily believe it is not in the power of man to do so." Perhaps the one most concise is that given by Peterson to his students, in which he defines insanity as a manifestation in speech and conduct of disease of the brain; a manifestly incomplete definition, and possibly the most elaborate is that of Spitzka with which you are doubtless more or less familiar.

The form of alienation most usually associated with inebriety is that of maniac depressive insanity in varying degrees of severity. To the eminent German, Kraepelin, we are indebted for this comprehensive term, and he was first to classify under one heading the different clinical syndromes such as mania in numerous phases, melancholia, periodic and circular, which had up to this time been regarded as separate diseases. Diversity of opinion exists regarding the inclusion of involution, that depression which is often noted in women at the climacteric, and in men about the age of fifty; but following Kraepelin and his school I have included it in the class with maniac depressive. The forms of psychosis in this classification fall into two groups; the first comprising those due to the influence of psychycal inhibition such as impairment of judgment, diminished power of attention, retardation of association of ideas, indifference to painful emotions, etc.

The other group comprises symptoms not of retardation but exhaltation of the mental organism and manifested in rapid flight of ideas, pathological euphoria, obsessions, motor excitements, delusions, and hallucinations. Either condition may be first ob-

*Read before the Tri-State Medical Society at its recent meeting at Wilmington, N. C.

served, though probably the majority of cases if closely noticed will show a previous history of mild depression characterized by hypochondriacal ideas, insomnia, malaise and sometimes slight loss of body weight. This gives way to conditions of an opposite nature. From being depressed, apprehensive and failing the patient is now exhilarated, with the symptoms characteristic of such a mental state and which he himself considers the sign of returning health and vigor. According to the intensity of the symptoms, course of the disease and the exciting cause the stages of mania have been variously classified, the terms of which are sufficiently explanatory, as mania mitis, the mildest form, periodic and circular mania, hypomania, etc.

Massachusetts was one of the first States to provide an institution for the observation and treatment of its alcoholic cases. This hospital, located at Foxboro, has been doing splendid work under the direction of Dr. Erwin Neff, who has made a considerable study of cases in which psychopathic and neuropathic conditions were noted in connection with alcoholism; and particularly in cases in which maniac depressive form was associated with periodical drinking, either in the stages of depression or elation. In writing him for some information as to the frequency of such conditions I received the statement that he had made a study of twenty cases in which alcoholism and maniac depression were associated, concluding with the remark, "I have no doubt this condition of affairs occurs frequently and that at least 10% of excessive drinking may be dependent on antecedent psychosis." Such statement from competent authority is certainly significant and there seems no doubt that however mild in character the psychosis may be it is probable that careful observation would reveal the typical syndromes of maniac depressive in varying proportion of instances of confirmed inebriety.

Without going into any discussion of technical accuracy I will pass on to a few clinical types most frequently associated with inebriety and to the history of a few cases where the underlying mental condition, though unrecognized early, undoubtedly antedated the drug excesses.

Case of Maniac Depression Characterized by Long Stage of Depression and Followed by Recovery.

Miss L. H. M., æt. 27. Admitted June 6th, 1910, for treatment of alcoholism.

Condition on Entering.—She had been on a spree lasting nearly a week, was noisy, quarrelsome and destructive, face badly bruised and eye blackened from falling against stove.

Family History.—Father was confirmed alcoholic, maternal brother insane for years, mother very nervous. Patient was a neurotic child, shy, and inclined to morbid thought. At the age of puebesence had a number of fainting attacks brought on, her mother said, by severe fright. From the years of fourteen until she finished school at eighteen was regarded as delicate. After this was well until twenty-five when she had a disappointment over a love affair and was much depressed for a year. Went abroad but did not appear much improved. While abroad began to drink wine to enable her to go about with less effort, as she expressed it, to "keep up" her strength necessary for frequent change of scene, etc. Remained abroad about a year and returned slightly better. Habits of drinking not suspected by mother until she came back. Has often been intoxicated during the past six months.

Further History.—Patient recovered from effects of alcohol rather slowly. At the end of two weeks in fair condition. She was at this time rather depressed, felt life a failure, was indolent, refusing to walk or ride, would not dress unless forced to do so, showed some signs of motor retardation, memory poor. This condition lasted about six weeks. On entering her room one morning she was noticed to be somewhat exhilarated in marked contrast to her previous condition. From this she passed to a moderately maniacal state, had hallucinations of hearing and delusions of an unsystematized nature. One day was Queen of Sheba, a celebrated actress, next was sister of Christ, etc. The stage of excitement was at its height at the end of the third week when it subsided and she became quiet. Condition at the end of the third month nearly normal. She remained under observation for about four months when she returned home. Three years have elapsed and she has continued well, is now doing considerable settlement work in connection with the church she attends. Her habits are correct and there seems no reason to doubt her recovery.

Peeiodic Drinking, Assoeiated with Circular Mania.

J. F., æt. 25. Admitted for alcoholism April 12th, 1911.

Condition on Entering.—Was recovering from an alcoholic debauch in which he fell on the pavement and cut his lip, requiring surgical attention at a General Hospital. Was confused, noisy, no hallucinations or illusions present.

Family History.—Father used alcohol freely and died at the age of 73 of pneu-

monia. Mother had involution melancholia, died at 52 of inanition after several months of tube feeding.

Previous History.—Was a highly nervous child, did well in school, graduating from High and Business School at 19. About this time was in an auto accident when three people were killed; the patient escaping with some bruises. After this he became moody and depressed, felt himself responsible for the death of his friends, though he was not driving the machine. Since then noticed to be at times secretive, unwilling to talk, depressed over his health and to speak of suicide. After this he becomes vivacious, talkative and inclined to be very sociable. Has been known to be using stimulants for some time but not thought that he did so before the accident. The debauch is usually preceded by exhilaration of speech and conduct, appears at such times to like notoriety, is extravagant in expenditure, almost reckless in conduct. Family have been much mortified by his action and feel that drink is responsible.

Present Condition.—Has appearance of recent debauch, admits intoxication, nothing abnormal seen on physical examination, patient is garrulous and circumstantial, wishes to discuss his case with every one, has many plausible excuses for drinking, will not admit that there is any psychopathic taint, though he confesses his mental equilibrium is not always stable, memory good, writes many letters, is agreeable in conversation when not discussing his case. Treated for alcoholism with good results. He remained in hospital for three months. During this period he was alternately elated and depressed. When depressed would refuse to talk much, would neglect his person, and was inclined to be careless in his habits, some motor retardation noted, refused to walk out or leave his room, hinted vaguely at suicide, discussed various means of accomplishing it, thought the Doctor did not understand his case. This is succeeded by elation, he is once more loquacious, extravagant in plans for the future. Personal habits in this stage good, shows disposition to be busy but wearies easily.

Further History.—Left the sanitarium in three months in good condition; then took a position as private secretary, appeared well for some months. One year later reported to be again intoxicated with mental condition of elation more marked than in his earlier attacks.

Diagnosis.—Periodic drinking associated with circular insanity.

Case III.—A. C., æt. 37. Admitted to Sanitarium December 16th, 1912, for treatment of inebriety.

Family Hietory.—Father had epilepsy, but seizures came at long intervals; death followed accident incident to fit (fell in the street and was injured by an automobile). Mother lived to old age, but maternal brother was said to have been queer and often depressed. His death by drowning was thought to have been accidental. Patient on entering was in a highly nervous state, hallucinations and illusions moderately active; he was apprehensive, agitated and mildly deluded, though when sharply questioned regarding these he would seem to realize their nature and deny them. Treatment for alcoholism gave good results, much better in a week and progress uneventful.

Personal History.—At the age of seventeen he entered preparatory school where he was severely hazed. The ordeal was deeply resented and he was known to be moody, suspicious of all, even those who had no part in his torture; he gradually grew more depressed and felt himself the most unpopular boy in school. While in school he began using alcohol to brace up for examination, and to relieve apprehensions of results. Entered college and made fair progress in work. It was noticed that he had now become a good mixer with the students, to have confidence in place of his former self depreciation but was often intoxicated. Remained in college two years, in the second signed a pledge. Took a position in business, was successful, also temperate. Three years later showed signs of depression of mild nature, worried over future troubles, again began to use alcohol. As the firm employing him had stringent rules against its use by employees, he was discharged, but to the wonder of his friends as his real troubles increased imaginary ones decreased and he was now optimistic in views. He moderated his drinking habits and the family considered him reformed, though the patient declares he used intoxicants all this period. He obtained another position but in less than a year he was again depressed and now thought he was ill and the work too severe and he resigned his place. Was treated for indigestion in a hospital where he claimed the physician did not understand his case and he left unceremoniously. Shortly after this he announced that a domestic remedy had cured him, he was once more cheerful and talked hopefully of his prospects. His optimism was always infective and when he was bouyant his family were accordingly hopeful, making it more difficult for them to have patience with what they termed his "vagaries." When the subject of leaving the sanitarium was discussed we advised against it on the ground of his previous mental history as we had obtained it. The family was informed of diagnosis of circular insanity of mild

nature. They were not disposed to believe it and felt that alcohol alone had been the Alpha and Omega of his trouble. He left our care after nearly eight months, during most of which he appeared absolutely normal. Three weeks after leaving, while preparing for a trip abroad, he became much depressed, thought he was predestined to failure in all he undertook and talked of suicide. Was now guarded from alcohol. Depression gave way to maniacal excitement and he was removed to a private asylum. One year after his commitment his mental condition was fair, but his periods of depression and excitement more frequent.

Circular Mania.

W. M., admitted to the Sanitarium May 10th, 1910.

Condition on Entering.—After an alcohol spree lasting some days he became so ill he was sent to a general hospital, from which he was transferred to a sanitarium. The following family history was elicited: Mother died of an acute disease when thirty-five; father alive at sixty, physical health good but subject to outbursts of temper at times so violent that the family lock themselves in their rooms. After these outbursts he seems humiliated and takes alcohol in excessive amounts for a few days, or until he has regained his self esteem when he becomes more temperate. Two brothers of the father are erratic, though unusually well educated and both have been successful financially. Patient always nervous as a child; entered a preparatory school and did well in his studies, but was not inclined to mix with the other boys, gradually grew more moody and after the death of his mother more depressed; entered college at the age of nineteen; at college refused to adhere to any course of study, though his interest seemed to lie in the line of *belle lettres* and fine arts. During his first year he seemed fairly normal in disposition, though always rather moody. At the beginning of the second year he felt his family were ashamed of him because he was taking no regular course of work, he was at times discouraged and blue. During his second year his health was not good and he lost flesh so that at the end of the year he left college and entered a sanitarium where he was treated for neurasthenia. Here it was discovered that he was using alcohol in considerable amounts to brace him up and, as he expressed it, "to drive away the blues." Effort was made to take the stimulant from him, but through the connivance of the nurse he continued to get it and was dismissed from the sanitarium at the end of three months. After dismissal he appeared to improve and took up the study of interior decoration for about a year; nothing abnormal noticed in his case at this time by his family who considered his good spirits and vivacity indicative of a cure of his former depression. He then went abroad and, having a large income, he indulged his fancy in art and bought largely of pictures and curios, though it was noticed his judgment was poor, as much worthless stuff was purchased. At the end of a year he returned, apparently normal physically but now his habits were questioned. He denied the use of intoxicants, however, though he confessed later that few days had passed without drinking since he first began the use of alcohol. Three years went by and as he was financially independent and removed from his family nothing was heard of him. At the end of this time he was often openly intoxicated, and finally on a trip to a neighboring State he was arrested as a drunk and sent to a work-house, but his condition was so bad he was transferred to a hospital. He was next heard from at the sanitarium where he was treated for alcoholism and made a good recovery. His mental state was apparently normal; he was a man of fine presence and his conversation and accomplishments made him a universal favorite. On the strength of previous history the case was diagnosed as one of maniac depressive insanity. When the family were informed of the diagnosis they were greatly incensed and removed him from the sanitarium. Two years of excellent health followed, nothing abnormal was noted by his friends; the diagnosis was more than ever questioned, though still adhered to by us. At the expiration of two years he had a short period of marked depression in which he felt he had committed unpardonable sins. This gave way to a high degree of maniacal excitement, hallucinations of sight and hearing, high degree of motor excitement. He developed delusions of a religious nature, sang loudly, declared he would never die but ascend to heaven, and attempted to prove his assertion. Escaping from the nurse, he tried to fly out of the window, fell to the pavement and was killed. I have reported this case at length because of some unusual features. First, the very long period of depression, lasting from his entrance to a preparatory school at sixteen to his admission to college. Though there were remissions of his condition, the opposite stage of excitement was too mild to be recognized and when the depressed condition improved he was thought to be getting well, though it is probable that careful observation at this stage would have found his symptoms suggestive. The stage of excitement in which he appeared to his friends as merely vivacious seems to be

equally long, though here again careful observation might have noted alternating symptoms of a depressive nature. After admission to our Sanitarium, where he remained for six months, he many times declared that he deemed it the misfortune of his life he had not come under the observation of a specialist during his years of depression, when in order to brace up he was forming alcoholic habits that afterward drew him down to the gutter and caused so much misery to his family. There seems to be no doubt that if such had been the case and the appropriate environment and treatment provided the end might have been otherwise.

In reviewing these cases briefly we are impressed by the following features common to all. First, all were nervous in childhood, all had more or less alcoholic or neuropathic heredity. Three showed lack of initiation, especially in the early stages in their history where unwillingness to adhere to any line of study, as in the first, and desire to leave school and disinclination to apply himself, as in number three, were noticeable features. Three drank in the depressed stage of their psychosis, one in the stage of elation. All were individuals in good circumstances of life and all were intellectually well equipped. The most noticeable feature common to all cases, however, was the fact that all were sent to us for treatment of inebriety, and in no case was the underlying psychopathic taint recognized by the family. These histories, necessarily imperfect, are not reported as furnishing data sufficient to prove any theory, but merely with the idea of suggesting a field in which thoughtful observation and investigation may produce helpful results. My desire is to especially protect our youth from passing unassisted through stages of mental and nervous disease when recognition of their morbid condition might result in such change of environment and occupation as to avert need of resorting to pernicious means to enable them to maintain their place in line. And I also desire to shield the reputation of a certain class which has too often been considered depraved when it is more truly irresponsible.

While I have confined myself to cases of mental disease, I do not forget that mental defectives and neuropaths also furnish a fertile field for the development of inebriety.

Treatment.—I will only state in regard to treatment that it is preventive in the early history of the case. Later, when habits are fixed, I believe sanatoria or hospitals are imperative. Removal from friends is absolutely necessary. The early recognition of conditions, and appropriate methods of dealing with them, will save many a man from demoralization and his family from incalculable anxiety and chagrin.

Modern View of Cause and Treatment of Diabetes.

By C. W. Canan, M.D., B.S., Ph.D., Orkney Springs, Va.

The treatment of diabetes today is far more successful than it was twenty-five or thirty years ago, when every case was regarded as necessarily fatal. This improvement is due to a better understanding of the etiology of this disease.

The author has devoted considerable time in studying the causes that lead up to this disease and we are fully convinced that over-indulgence in eating is the first causative factor in producing the condition known as diabetes. This coupled with a sedentary life very soon produces a weakening of the digestive powers and causes an increase in the accumulation of waste in the system. Following this the excretory organs fail to eliminate properly and toxic material accumulates in rapid succession. This increase of waste material and poisonous toxins produce a diseased condition of the pancreas and liver, preventing a proper performance of the functions that governs the production and combustion of sugar in the systemic economy. It has been proven that these same toxic substances (at least in certain individuals) irritate and depress the nerve centers and in this way interfere with this same function; but in the majority of instances these poisons accumulate until the pancreas and liver are so poisoned that anatomical lesions of these organs are the result. The pancreas is most susceptible to this condition.

These lesions occur in the islets of this organ, or as an interacinar pancreatitis, also as an arteriosclerosis and cirrhosis in both pancreas and liver. In the presence of either of these diseased conditions these organs are unable to properly perform their complex functions, if at all.

If the pancreas is diseased and its functions crippled it cannot furnish trypsin sufficient to give to the white blood corpuscles their normal phagocytic power. It also fails to furnish the blood that necessary hormone which activates the sugar oxidizing enzymes in the muscular system; we are therefore driven to the conclusion that diabetes is the result of disordered nutrition, and its starting point that of a faulty dietary.

This being true we are in a position to treat these cases more intelligently than ever before. The old assumption, because sugar was found in the urine all starches and sugars must be excluded from the diet list,

was wrong and did much harm, especially to children and young people.

We now know that over-eating of all kinds of foods will cause faulty metabolism, develop toxins and poisonous acids, which have to be destroyed by the liver and pancreas.

The pancreas in trying to overcome these toxic substances is overworked and a diseased condition of the islands of Langerhans is the result.

Those who eat heavily of meats and take large quantities of carbohydrates at the same time are the ones that become victims of this disease.

Statistics show it to be a disease of the well-to-do class. They attend large dinners, eat heavily of beef, pork, lamb, fowl, game, fish, oysters, lobsters and rich desserts. This class of individuals are generally addicted to the use of whiskeys, rich wines and condiments. All these as a rule tend to gross mastication and over eating.

If we turn our attention to China with her teeming millions; to India and other countries where the people live almost exclusively upon rice and vegetables; or on sugar and fruit as the inhabitants of New Guinea we find the disease rare indeed.

Prophylaxis.—To prevent the disease, eat sparingly of a well balanced ration; meats, vegetables, cereals, and fruits; drink plenty of water, see that all the excretory organs are doing their work properly. Abstain from stimulants and highly seasoned dishes, take systematic exercise and do not be afraid of pure air and sunshine. When the lithic acid diathesis exists all over-excitement of the nervous system, both menal and physical, should be avoided as far as possible.

Hygiene.—Every precaution should be taken against contracting cold. Flannels or silk should be worn next to the skin and the outer clothing should be warm, for not only has the body less heat producing power than normally, but as has been shown there are excesses of poison in the system and the eliminative process is far below par, and unless the skin is kept active by warm clothing and frequent baths this condition which is so essential will not be benefitted.

For those who are much enfeebled, massage is very essential. Avoid mental and physical fatigue whenever possible.

Diet.—As we have demonstrated to our satisfaction the ingestion of large amounts of any one kind of food does harm not only while treating the patient, but is one of the principle factors in producing the disease per se. The above assertion is especially true in reference to sugar. The sugar that is found in milk, fruits and vegetables is not injurious if these articles are eaten in moderation. The diet that has given the best results is one that is easily digested and assimilated, and at the same time one that will leave as little residue as possible. The writer has never favored a strict milk diet, because of the large amount of debris that always accumulates in the intestinal tract, forming a hot-bed for the development of all kinds of germs.

These patients digest potatoes more easily than bread, especially if beateu until very light with a little milk. Remember that it is a grave mistake to restrict the diet sufficient to run down the health and strength of the patient, in order to reduce the per cent. of sugar a trifle.

The author has found that an absolute fast of 24 to 48 hours has never failed to be followed with good fesults. These should be advised every six to ten weeks, or slightly oftener if the patient has a tendency to over-eat.

A purgative containing prodophylin and bilein should be given during the fast, or the colon should be thoroughly flushed with warm water.

The object of this plan is to rest the digestive organs and favor the elimination of waste material and poisonous toxins; also to prevent the development of acetonemia.

Medicinal Treatment.—In selecting remedies for this disease, do so with an aim to regulate the digestive system, the nervous system, the vascular system and the glandular system, for all these have been deranged. The mineral acids, aromatic bitters and animal enzymes are all indicated. The alkaline carbonates are more apt to do good than the acids except in certain indications. The writer believes that the best results can only be secured by maintaining the normal alkalinity of the blood if possible, because a decrease tends to reduce the power of the oxidizing agents in the blood and diabetic intoxication is the result.

In those cases in which there is a tendency toward furunculosis calcium sulphide is the remedy of choice. Opium or some one of its alkaloids is sometimes our most useful remedy to lessen the quantity of urine voided and the frequency of micturition. The bromides are used for the same symptoms, and at the same time relieves thirst and restlessness. Some clinicians prefer the arsenate of bromide to all other forms of bromides but the writer has had no experience with it.

Among the most useful remedies are the enzymes when they are not deterioated. Pharmacy has come to our aid and has combined the bromides of gold and arsenic with trypsin, amylopsin and other enzymes from the islands of Langerhans in the pancreas which has been called "Trypsogen."

This agent supplies to the system the essential elements that are either greatly reduced or wanting in this disease. The author has only had the opportunity to prescribe this remedy in a few cases, but the results in these were highly gratifying. We will now give our notes of two of these cases and the reader can draw his own conclusions, for they are typical of those not reported for want of space.

Case I.—Frank K—, farmer, age 46, family history negative, has been in a hurry all his life, heavy eater, and has bolted his food since boyhood. For nearly two years has suffered from severe attacks of indigestion. Voids large quantities of urine; has to get up several times during the night. Has been gradually loosing flesh and strength for over one year.

Sept. 20, 1912.—Urinary analysis. Amt. passed in 24 hours 6000 c.c., sp. gr. 1013; amt. of solids 181.7 grs.; amt. of sugar per oz. 4½ grs.

Oct. 20, 1912.—Urinary analysis. Amt. passed in 24 hours 4000 c.c., sp. gr. 1015; amt. of solids 148 15 grs.; amt. of sugar per oz. 2¾ grs.

Feb. 20, 1913.—Urinary analysis. Amt. passed in 24 hours 2500 c.c., sp. gr. 1020; amt. of solids 95.92 grs.; amt. of sugar per oz. ¾ grs. This patient has gained 15 lbs. in weight, also much of his lost vitality and is following his profession.

Case II.—Noah W—, book keeper, age 52, has been in office for 35 years. Has been having boils for over a year, has lost flesh, can't eat and looks very badly.

March 5th, 1912.—Analysis made at the beginning of treatment. Amt. of urine passed in 24 hours 3500 c.c., sp. gr. 1007; amt. of solids 199.78 grs.; sugar per oz. 6 grs.

April 5th, 1912.—Sugar per oz. 5½ grs.

May 5th, 1912.—Sugar per oz. 4 grs.

June 5th, 1912.—Sugar per oz. 3¼ grs.

Oct. 1st, 1912.—Amt. of urine voided in 24 hours 1700 c.c., sp. gr. 1013; amt. of solids 92.5 grs.; sugar per oz. 1¼ grs.

Patient was under treatment nine months and gained 10 lbs. in flesh, has returned to his book keeping free from boils and full of energy.

In comparing results secured by other clinicians we find that they have had most excellent success with this product.

Do not jump to the conclusion that we have in this product a remedy that will cure every case of diabetes; if you do you will be disappointed, for there are many things essential, besides the remedy, in treating a disease so grave as diabetes. While we believe it is the most effective agent yet placed before the physician, its effect must be reinforced by careful dieting, short but absolute fasts, and careful observance of the rules of hygiene. Our experience with the remedy is, that it should be pushed, and do not be discouraged if the patient does not improve as soon as you expect, but continue the remedy.

Remarks.—Let us repeat a few things that are paramount in the treatment of diabetes. That overloading the digestive system soon produces insufficient elimination. No sooner does this condition take place than there is an accumulation of toxic albumenoids and acids. That the liver and pancreas are soon crippled by these poisons, and if continued anatomical lesions of these organs are the result. In this condition these organs fail to secrete the necessary elements or enzymes that govern the oxidization and production of sugar, and diabetes is the result. To cure this condition we must regulate the diet, and order regular fasting, so that the digestive system can recover its tone.

That dieting and short fasts not only aid in restoring the digestive system, and increase absorption and assimilation, but will be found a powerful factor in aiding the eliminative organs in freeing the system of the accumulated poisons. That the diet should be one that is easily digested and one that will not produce an excess of toxic waste.

That remedies to be successful must reduce the over-stimulated vascular system; cut down high arterial tension and supply the blood with the necessary hormones that govern the glycogenic function until the liver and pancreas are able to perform their normal functions.

Exploratory Surgery for Diagnostic, Prophylactic and Curative Purposes in Occult Intra-Abdominal Conditions.*

By Stephen Harnsberger, M.D., Catlett, Va.

This paper is intended as a word from a general practitioner to the general practitioner. We general practitioners know little about cancer. There are two reasons for this: (1) We know little because we take little interest in its study. (2) We know little because there is little to be known.

Knowledge parallels interest. Interest urges to work and work begets knowledge.

The Cause of Cancer is Unknown.—While the trend of opinion in America seems to lean towards its parasitic origin, we must note the disfavor into which this and the various other theories of its origin have fallen.

*Prepared especially for the Charlotte Medical Journal.

Adams says: "That cancer is not due to bacterial or parasitic origin." Copeman, in his conclusions, adds: "That cancer is not, in the ordinary sense, an infection, there being no evidence that its onset and continued growth is due to any recognizable micro-organisms." On the other hand, Robertson and Young lean strongly toward its parasitic origin. This belief is based on evidence derived both from cultural and histological observations. These observations are confirmatory of the conclusions of Gaylord, Fischer, Clowes and Baeslaet. Von Laden, Eison and others hold like views as to the etiology of cancer.

Dr. A. F. A. King, Washington, D. C., believes that cancer is due to foreign cells and that these foreign cells are misplaced spermatozoa. He cites strong reasons in support of his belief.

Dr. W. P. Carr, of Washington, in speaking of the nervous and digestive disturbances, which he regards as an almost necessary factor in the production of cancer, says, "This condition is primarily and essentially exhaustion of the brain cells or premature ageing of the brain cells while the epithelium is still comparatively young and vigorous."

"Experimental chemistry," says Freund, "has lately shown that in cancer some normal element in the cell seems to have been used up and some foreign element has taken its place. This change in the cell has been rendered evident by recent biologic research which has shown among other things that the extract of tissues from certain points known to be a favorite developing point for cancer—such as gastric ulcer tissue—does not possess the normal tissue property of destroying cancer cells." He says this extract lacks the normal fat acids with which the normal cell protects itself against cancer. More than this, the intestinal content of a person with cancer—even when the cancer is not in the alimentary canal—does not contain the normal fat acids but generates abnormal fat acids which induce a break-down of albumin. The abnormal products which result from this, act like a poison on the cells which are already suffering from the lack of the normal lipoids. A horse was immunized by injection of puncture fluid from a patient with cancer, and its serum, which at first destroyed cancer cells only at a 1 to 5 dilution, by the end of the year had acquired a destructive property of a 1 to 300 dilution. This, says Freund, points the way to neutralize with antibodies the cancer-fostering substance and to prevent its production in the intestines." This report of Freund is as late as December, 1913, and is, in my opinion, the most important knowledge we have had on the subject of cancer.

While the adverse criticism of one theory does not enhance another, this is not sufficient reason for suppression of observation and research, for, on the whole, our knowledge of cancer is increasing annually. When we consider the extent to which such a contrariety and divergence of teaching has influenced medical thought in this country, we can well see how it is that the general practitioner takes so little interest in the subject of cancer.

About the Symptoms of Cancer.—Mickhailoff considers (1) the use of potassium iodide for the rapid diagnosis of cancer from tertiary syphilis, and (2) the use of the same drug in the treatment of cancer of internal organs. To make the differential diagnosis, which is really making evident a symptom, he gives from one to three enemata, containing potassium iodide 3i, sodium carbonate 3ss, and water 3iii. He precedes these about one hour by a cleansing enema. If the patient's temperature rises after using the injection, he has cancer. If syphilis, the temperature remains normal or subnormal. But it is well to keep in mind that there are instances where fever shows in the late stages of syphilis.

Albu says that if a patient gradually loses weight under a nourishing and easily digested diet, there is room for the assumption that he has cancer. To test the matter, give a nourishing diet of easily digested food at frequent intervals. If the patient continues to loose weight, we are justified in a diagnosis of a malignant process. If it is the stomach, symptoms suggestive of atrophic chronic gastritis point to cancer of the fundus; if suggestive of stenosis, then there is probably cancer of the pyloric end, and this is made stronger if the amount of hydrochloric acid slowly lessens from week to week. The absence of hydrochloric acid is not now considered as a clue to cancer, for we know that gastric secretion has a tendency to diminish in persons past 50 years of age, and that the complete absence of free hydrochloric acid is not uncommon at advanced age. A high hydrochloric acid content excludes cancer, while a lactic acid content, if it continues or shows repeatedly, is a very strong evidence of cancer.

We always look for leucocytosis, if malignant tumors are present. The count is more pronounced in sarcoma than in carcinoma. Polynuclears are always largely increased. In gastric ulcer (Baradoulin), leucocytosis of digestion can always be determined. Fat necrosis no longer points to destructive diseases of the pancreas, as recent observations find that it goes with other conditions also.

Usually the first symptom of cancer of the bowels, especially of the splenic flexure, is a sense of uneasiness in the abdomen, with slight distention, accompanied by expulsion of gas, which appears increased from rectum as well as from stomach. Subsequently close examination will find that stools contain gelatinous mucus, transparent and viscid, but not coagulable, as in inflammatory conditions of the bowels. Traces of blood are not detected until late in the disease. It is frequently observed (Dr. Roy) that cancer of the stomach and upper portion of the intestinal tract gives anemia or wasting, while in the lower abdominal organs and out in the mesentery this is not the case. A history of constipation is nearly always given; also a weakness and cachexia not at all in proportion to the subjective symptoms. Dr. W. L. Mallory, of Washington, has had cancer patients with an irritative diarrhœa. To reiterate: Prolonged constipation, with distention or distress of the bowels, emaciatiod and a vague sense of weakness, uninfluenced by treatment, are symptoms of importance, and should be looked upon with suspicion.

Remissness Forfeits Opportunity.—So we see that the symptoms of cancer in its initial stage are almost as little known by the surgeon and research man as by the general practitioner, though it is a fact that the former are making a persistent effort in the direction of light. This lack of a specific cause and dearth of intelligible symptoms has minimized to the lowest ebb the active interest of the general practitioner in the subject. This negative feeling blinds him to the slight clues he might have for a working basis, and his patient goes on from bad to worse, and perhaps ultimately drifts to the surgeon, who then can only cast out to him, in most instances, the frail straw of hope.

The Surgeon an Abdominal Pioneer.—Alexander Pope lightly replied to a friend who called to see him in his last hours: "Yes, my friend, I am dying of a hundred good symptoms"—strangely like our cancer patients who are dying—dying of many good symptoms. And yet we let these symptoms go by like the water under the bridge, unseen and unused. Every lesion, no matter how trivial it may be, and no matter where it may be situated, carries its more or less distinctive marks and characteristics. The symptoms are there; only in our ignorance we fail to recognize them. The disposing factor of cancer gives its symptoms; the initial step in cancer growth gives its symptoms—only we fail to see them; but we will see them when knowledge supplants ignorance, just as we now see the symptoms of appendicitis, the marks of gastric ulcer and the signs of bile tract infection and its sequences. Two decades ago we were as ignorant of these conditions as we now are of cancer. The surgeon blazed the way, illumined the trail and brought us face to face with our present knowledge of these things; and I have that confidence in his integrity and honesty and skill to believe that, if we will now only do our part by taking to him our patients with non-diagnosed and non-diagnosable intra-abdominal conditions, in due time he will again bring to us the knowledge that will make the way of our cancer patients joyous with hope. The ignorance of the general practitioner in the matter leads him into the apparent error of extraditing his cancer patients to the care of the surgeon; but the loss of a patient to the general practitioner is a trifling affair compared to the loss of a life, and, as the question stands today, that is just what the situation means.

Death Lurks in Delay.—I have had a good many years of bedside observation, and along with it some experience. I am aware of much of my own shortsightedness, which I conscientiously regret. I have likewise witnessed much of the same sort of thing in my professional associates, and I am convinced that apathy, doubt, hesitation, delay (better known, perhaps, as conservatism) has lost—not saved—our patients. It is easy to understand that the earlier the patient is seen, the more difficult the diagnosis. It is also a fact that the life of the cancer patient depends upon the early diagnosis. Recent progress in the surgical treatment of cancer accentuates the importance of the early recognition of the malignant neoplasm and the nature of the initial morbid process. *Therapeusis, X-ray, etc., and recently radium, have worked discredit to the only known trustworthy means of staying the ravages of this most aggressive and quickly ruthless disease.* And still I would caution you not to condemn either. They have done some good in superficial cancers, and with a better knowledge of their action, physiological and chemical, I trust I am not wrong when I say that they will, after a while, do much good.

Life Hinges on Surgery.—A study of the history of cause, increase and treatment of cancer, as found in the leading foreign and domestic journals of the day, while it will broaden one's knowledge on the subject and enlist his interest, will as surely narrow his convictions down to this one fact—*that the only hope of the cancer patient is surgery; surgery if he is seen early, and surgery if he is seen late.* The value of exploratory surgery for diagnostic, prophylactic and curative purposes should receive

a great deal more attention in medical literature; and, what is more, I think I can see good in carrying this fact to the minds of the laity. The scalpel and its early exploratory findings are the only hope of the patient in many occult intra-abdominal conditions. If it is ulcer, or cholecystitis, or cirrhosis of the liver, which is always fatal under the expectant treatment, or appendicitis, or cancer, or other dangerous focal trouble, an early inspection through intervention of the knife in skillful hands will save a big per cent. If no lesion is found, the harm that is done under modern surgical technique must be small indeed. Personally, I have never seen a patient die from malignant or dangerous condition when operated upon early—sarcoma may and probably will make an exception.

Remember: *The inexorable verdict of delay, like the wages of sin, is death.*

Morphine--The Brain.

By J. W. Williams, M.D., Richmond, Va.

"No where is to be found a more miserable specimen of degeneration of moral feeling and impotence of will than is presented by the person who has become the abject slave of either of these pernicious indulgences (alcohol and morphine)".—Waller; The Brain, p. 245.

Morphine and all narcotics first injure the cells of the *cerebrum*, then all of the other organs of the nervous system in the order and importance of their functions and in the inverse order of their development. The cerebrum ministers to the highest mental faculties of man, and these intellectual faculties are first affected by morphine and alcohol. Next, it affects the *cerebellum*—the organ of coordination; then the *spinal cord*, and, finally, it affects the *medulla oblongata*. The respiratory and cardiac centres are located here (in the oblongata). We have all seen the cerebrum so affected by both morphine and alcohol that the unfortunate habituæ lies before us unconscious; and we have also seen the cerebellum so disturbed that walking was impossible—the power to coordinate the muscles was lost; but in these cases both respiration and circulation continued, though greatly depressed, and life exists; but so soon as the respiratory and cardiac centres in the medulla oblongata were injured death ensued. "All cerebral stimulants affect the cranial centres in the inverse order of their development—the intellectual faculties first, then other vital functions, and last and lowest of all, the functions of respiration and circulation. Is it not certain that a centre thus daily and hourly exalted and depressed will, in time, be injured?"—Dr. Barringer.

During the last few years much work has been done in the *post mortem* examinations of the brains of persons who have died from the effect of alcohol. From the results of these investigations we know much of the baneful effects of alcohol and morphine upon the cells of the brain, and we are now saving 85% of all cases, whereas three years ago, we could not save one per cent. of such cases.

For sometime it has been known that an "elective affinity" exists between the nervous tissue and narcotics—especially for morphine and alcohol, but the thoughtful and conservative physician and investigator wants to know why this elective affinity? Why does, for instance, podophyllin, leptandrin and euonymin act on the liver; ipecac and sulphate of copper and lobelia on the stomach; epsom salts and phosphate of soda on the bowels; and morphine, alcohol and all narcotics upon the cerebrum, or the highest faculties of man, first? "It has been noticed that all substances which are soluble in fats and do not injure animal tissue are narcotics."—Cutten, B.D.M.S., Ph.D. (Yale), Psychology, p. 15. I put ¼ gr. of morphine in a drachm of olive oil. It was dissolved in less than one minute; so, too, of alcohol. I think the statement of Prof. Cutten is correct." The power of a narcotic is noticed to bear a direct relation to its affinity for fats and an indirect affinity for water—by testing the relative solubility of olive oil and water with any narcotic, the exact narcotic effect can be calculated."—Ibid. Now, fats predominate in the cells of the brain. The following analyses of brain tissue (gray matter) is given by Baumstork and Pattowsky respectively:

Eau	769.97	Eau	816.
Rotagon	10.80	Albumine	102.
Albumine	60.79	Leicthine	15.06
Cholesterine	6.30	Cholesterine	34 15
Cholesterine comb	17.50	Cerebrine	14.08
Newcline	1.99	Extractive Mat.	12 00
Newrokoratim	10.43	Mineral Salts	2.56
Substances mineral	5.62		

Leicthine, Cerebrine and Cholesterine are soluble in alcohol," p. 17. Here, we are in sight of the reason why alcohol and morphine affect the higher intellectual faculties of man first. There is no exception to this rule. The brain is incased in a hard, bony skull to protect this highly organized organ from injury, and the only way morphine, alcohol, cocaine, heroin, &c., can injure the brain cells is through the blood; and just as surely as the drug is injected into the blood by the hypodermic syringe, just so surely does it reach the cells more quickly than by mouth and the injury is more disastrous. The morphine and alcohol are dissolved in the fatty brain cells—not that

the cells are dissolved in the narcotic, as was formerly thought. "The changes in the cell are quite startling. These degenerative changes continue until all that is left is a gnarled, knotted stump. When the degeneration is advanced, the cells show signs of decay and disintegration; but even before this, the cells show a lack of *nutriment*. The coagulating albumin thickens and clogs the cell membrane, thereby hindering endosmosis and the assimilation of nutrient materials on the one hand, and exosmosis or excretion of broken down, effete products on the other." Cutten-Psychology-p. 24-25.

Morphine and alcohol (narcotics generally, affect in regular sequence and in their relative order: 1st, the cerebrum; 2nd, the cerebellum; 3d the medulla, and last, and lowest of all, the respiratory and cardiac centres. 2nd all narcotics have an affinity for fats, and inasmuch as fats predominate in the brain cells, the brain cells are first affected, then the other organs in regular order.

In this nervous, restless age the use of narcotics seems to be on the increase. Four hundred thousand pounds of opium are imported into this country annually, when fifty thousand would cover every medical purpose. We have nearly four million drug-addicts. In France official statistics show that 20 percent of the medical profession die of morphine."—Leviathan-p. 174-179.

Can these cases be cured? Yes, by *elimination* through the bowels, kidneys and skin, and *only* by this means, all the fake sanitaria advertised in the newspapers to the contrary notwithstanding. As surely as the system has the power to lay up the drug in the various tissues and organs of the body—the blood, cells, muscles, and other organs, just as surely, if elimination is thorough and complete through bowels, kidneys and skin, will the indescribable nervousness and agony subside and give place to a "feeling of comfort" and the patient cured because the *cause* of his sufferings has been removed and he is placed where he was before he took the first dose.

I recently secured 140 stools in 2 weeks from a very prominent lawyer, to say nothing of the toxine and effete matter eliminated through his kidneys and skin during this time. He came direct from a sanitarium where he had spent three weeks, and during that time he did not average one stool a day.

401 E. Franklin St,

A Few Examination Questions of the Louisiana State Board of Medical Examiners.

PATHOLOGY.

1. (a) What is an infarct? (b) What is an anemic infarct? (c) What is a hemorrhagic infarct?

2. Describe the process of healing of wounds by first intention.

3. Name the different forms of pus-producing cocci, and state which of these are the most virulent.

4. (a) What is suppuration? (b) What is leucocytosis?

5. What changes occur in joints following gonorrheal metastasis?

6. Describe the pathology of acute osteomyelitis.

7. What are the pathological changes found in the small intestine in typhoid fever?

8. Describe the gross pathology of acute lobar pneumonia.

9. Describe the pathology of pyonephrosis.

10. Describe the pathology of arteriosclerosis.

THERAPEUTICS.

1. (a) What are mydriatics? (b) Name them.

2. Name the principal drugs used for the reduction of blood pressure.

3. (a) What are cardiac stimulants? (b) Name some of the best known drugs used for this purpose.

4. Describe the physiologic action of the diuretics.

5. How would you treat a case of acute opium poisoning?

6. What are the antidotes for arsenic?

7. Describe the treatment of valvular disease of the heart with failing compensation.

8. How do substances act by counter-irritation? Name some of the best known counterirritants.

9. Describe the action of antidiphtheritic serum in a case of diphtheria.

10. What are the physiological actions of the salts of cinchona?

OBSTETRICS.

1. (a) What are the causes of prolonged first stage of labor? (b) dangers? (c) management?

2. Discuss in general the principal drugs used to hasten labor.

3. What are the prerequisites, indications and contraindications for the use of forceps?

4. What are the causes of hemorrhage before and after delivery?

5. (a) What conditions necessitate ver-

sion? (b) forceps delivery? (c) Cæsarean section?

6. Describe a Cæsarean section.

7. Vaginal examination shows the saggital suture occupying the right oblique diameter; the small fontanelle is felt opposite the right sacroiliac synchondrosis, the large fontanelle being directed toward the left and front. (a) What is the position of the child? (b) how may the case end? (c) treat the case if nature's efforts are unsuccessful.

8. What changes occur in the fetal circulation at birth?

9. Give the etiology and treatment of subinvolution of the uterus.

10. What is the cause and treatment of frequent urination in pregnant women?

Blaxland and Claridge, (British Medical Journal) reports seven cases of acute pancreatitis with seven deaths, five of which were operated. The main symptom, in all cases were acute abdominal pain coming on suddenly. In some cases there was a history of previous attacks of indigestion; tender distended and painful abdomen; vomiting and collapse. All of them either at the time of operation or at the post-mortem examination showed evidence of fat necrosis and all cases at operation exhibited more or less dirty, reddish fluid in the pelvis which the authors consider to be diagnostic. In five cases gallstones were found in the common duct; in one case the gallbladder was firmly adherent to the small intestine; in one both ducts and bladder were apparently normal.

In discussing the pathology the Dr· are agreed that the infection comes from the duodenum owing to the loss of the integrity of the valve of Vater, permitting the flora of the bowed to pass along the pancreatic duct to the gland proper. The writer would also point out the similarity of the onset of acute pancreatitis and perforating gastric or duodenal ulcer. He can also vouch for the common association of this and chronic pancreatitis, with gallstones lodging in the common duct. In the chronic form at operation he has noticed how hard and indurated the gland feels—almost suggesting a malignancy—but strange to say at the autopsies, the gland although enlarged has lost its induration; most likely the latter condition during life is due to active hyperaemia in a dense capsule.

Alimentary Toxemia: Its Symptoms and Treatment.—Robert Saundby, The conclusions reached by the author are as follow: 1. Under physiological conditions the natural protective agencies in the alimentary system are sufficient to shield the body from the dangers of poisons formed therein or those introduced with the food, provided that these are not in overwhelming amount. 2. Infrequent or incomplete evacuation of the colon is not in itself a cause of disease. 3. Such morbid symptoms as arise result from a breakdown in the protective machinery, in consequence of functional defect or pathological changes in the organs concerned. 4. Wholesome food in reasonably quantities may consist of animal or vegetable protein, carbohydrates, and fat in due proportion, and the evidence does not justify the entire exclusion of animal protein, as being directly or indirectly the cause of toxemia. 5. When toxemia is present treatment should be based on the principles of eliminating the poison already present, preventing any further introduction and reinforcing the natural protective agencies. 6. Where there is extensive disease of the wall of the colon, the exclusion or removal of this organ is a justifiable proceeding after a reasonable trial has been given to medical methods.—The British Medical Journal.

Diphtheria of the Esophagus.—Rolleston (British Journal of Children's Diseases) calls attention to the fact that this condition is probably not so rare as is generally supposed, although there are details of only twenty-four cases on record. In the author's case, a boy of six years, death resulted on the fifth day and the autopsy showed a diphtheritic membranous deposit in the lower portion of the esophagus, in addition to that found in the palate, nasopharynx, larynx and trachea. The author examined two additional cases of diphtheria which died in the acute stage, in two of which an esophageal membrane was present. It is to be noted that although diphtheria of the esophagus and stomach is usually fatal, four cases of diphtheria of the intestines have been recorded, all of which recovered. In those cases of diphtheria of the esophagus which ended in recovery, a stricture resulted.

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

"THE PHYSICIAN A BENEFACTOR."

In the earliest dawn of medicine the vocation of the priest and the physician were blended in one individual, but as the science of medicine evolved from the chaotic mass of mysticism and superstition that enshrouded its earlier ministrations, the priest continued the fixedness of his thought on the spiritual contour of things, while the man of medicine, appreciating the fact that the two vocations had arrived, to an extent at least, at the parting of the ways, delved more deeply into the study of the physical man, his most intimate anatomical body tissues, his physiologic function, the essential character of disease and the material effects of its ravages to a degree, that as the generations have passed emphasized more fully the complete severance in twain of the one time physician-priest.

A generation ago or more the business of the advertising quack and his ilk had assumed the large proportions of the present day, and in a day too when the clergy were not, as a rule, paid the fairly comfortable salaries the pastors of so many of the modern day churches receive, the members of the medical profession gladly ministered freely and without charge to the clergy and their families with the thought that in most cases, at least, their professional services were appreciated. Within the present generation, possibly unconsciously and only in harmony with the asserted growth of commercialism in so many subtle forms, it has come to pass that the average minister of the gospel demands, receives, and seldom expects to pay for, the most exacting and very best service the members of the medical profession afford. And after receiving such sacrificial service at the hands of physicians immediately become the ecclesiastic purveyors of the praises of each and every quack compound advertised within their knowledge. Until very recently, the columns of almost every religious newspaper in the land was open to the exploiting of every form of patent medicine, each bearing choicest testimonials from the clergy attesting its special value in all pathological states. These twin sins of the members of the preaching profession, the wish to secure (and adopting as a matter of their right) free medical service from physicians, while these same doctors were expected to pay liberally on the salaries of the preachers, and the disposition of the clergy to extol the virtues of every patent medicine or every irregular or quackish method of treatment or of practice, has reached a point where a great and growing number of our profession have ceased to view with friendly regard or appreciation, the calls for medical service made upon them by many of the clergy, feeling that if the reverend brothers, when well, constantly advertise quackery and quackish methods of practice, that when ill they should not bother the regular profession with calls for free treatment. Again many medical men of limited means, (and most physicians are men of limited incomes which, after the mid period of life, progressively decrease) have felt they should not be expected by boards of deacons, or stewards, or vestry, to pay the minister fully as much cash on his salary as other members of the church organization pay, without the large and often frequent claims of the pastor and his family on the doctor's time being considered.

Thinking along these lines as many thoughtful physicians have, there has been developing with many a sentiment that the average minister does not appreciate the service his doctor gives him, and the general run of the church press have given so much space to the advertising of quacks and quackish methods that they too do not feel the proper degree of appreciation of a profession, the members of which they ride so freely and so frequently.

With the knowledge of these things in our mind it is refreshing to read the following kindly and wholesome words from an editorial utterance entitled "The Physician a Benefactor" in a recent issue of the ably edited organ of the North Carolina Baptists, the Biblical Recorder, of Raleigh, N. C.

"Those who wince under the high bills presented for medical attention may sometimes lose sight of the beneficent crusade which all reputable doctors are making for the prevention of disease. It would seem they are thus working directly against their own financial interest. They seem, nevertheless, to be as industrious in trying to keep the people well as to heal them when they are sick. As an illustration of what we are saying, take the estimate that if vaccination had never been discovered, physicians would today be making $1000 caring for smallpox patients where they now make one dollar for vaccinations. There are of course, quacks and quacks, some of them, no doubt, 'in good and regular standing,' in the profession, but the good physician is truly a benefactor to the race." J. H. W.

THE MILK SUPPLY OF INDIA.

If there is anything which, on the surface, needs improvement in India it is the milk supply. To look at the miserable half starved, dirty, hobbled cows and buffalo cows of that country is enough for the most inveterate milk fiend to cause him to eschew it altogether. Generally the milk of India is just as bad as one would suspect it of being. How the cows ever can spare any of their nourishment to go for milk I do not know. It is well that this subject received much attention at the recent sanitary conference at Lucknow. Papers were read by Dr. Joshi, Mr. McMahan and Mr. Rau. Mr. McMahan said that the milk of the Indian buffalo cows was richer in fat than that of the European milk. I suppose their fat all goes into their milk, for there is certainly none left elsewhere. He said it should not be compared with European milk. Surely not. The author thought that the other standards of milk would be useful in forming standards of comparison in India. Dr. Turner spoke at length on the advisability of fixing bacteriological as well as chemical standards. Such standards differed locally and should be fixed by persons adequately acquainted with the local conditions. Very large quantities of condensed milk, especially Swiss, are now used in India, and attention was called to the necessity of fixing chemical and bacteriological standards for this as well as the native milk. Recent researches had shown that imported condensed milks were largely contaminated bacteriologically, especially with staphylococci. Dr. Mann in introducing his paper on the milk supply in India said that he thought that his paper described the first complete examination of the milk supply in India of a large city. In Poona, the city referred to, the amount of milk consumed per head was extremely small but largely adulterated. In initiating any measures for the improvement of the quality of milk it would necessarily follow that prices would advance and that the poor would be deprived thereby of their milk. Whether no milk or bad milk is worse is an open question. He thought that the amount of milk from each animal should be increased as much as possible. Cows should be removed farther from the cities to cheaper and more healthful surroundings The milk supply of cities from the outside should be organized and controlled. Dr. Gwell gave statistics on the prices of milk in Lahore, and the profits on the same. He found the expense of feeding cattle responsible for the high price of milk. He complained of the unsanitary practices of the workmen about the handling of milk. He urged the necessity for organization preceding restriction. They could only succeed through co-operating with the producers and should not antagonize them. We hope that the discussion of the milk supply of India at the sanitary conference will bear good fruit. India sadly needs improvement in her milk supply. Her cows need better food and more of it. How to get this in a country where the people are starving is a problem. They need more freedom, not always tied or hobbled or herded. Lastly, they need better cows. E. S. M.

DR. L. B. MCBRAYER, OF ASHEVILLE, BECOMES DIRECTOR OF THE N. C. STATE SANITARIUM FOR TUBERCULOSIS.

On April 1st Dr. Lewis B. McBrayer, of Asheville, N. C.. assumed the duties of Superintendent of the North Carolina State Sanitarium for Tuberculosis at Montrose, N. C., and Director of the Bureau for the Prevention of Tuberculosis recently established by the North Carolina State Board of Health. The State Sanitarium at Montrose was placed under the control of the State Board of Health by special legislative enactment last October, and it is the purpose of the Board not only to utilize to the fullest extent possible the small plant already established on the splendid 1400 acre tract of land and provided for sanitarium uses in the sandhill section of the State in Hoke county, a few miles from Aberdeen and Pinehurst, N. C., but in addition to extend the anti-tuberculosis work of the Board throughout the State, and Dr. McBrayer will have charge of this work also. With the skilled and well-trained tuberculosis expert the Board has placed at Montrose to conduct the management of patients there under Dr. McBrayer's direction, and the latter's well known success in whatever line of work he has engaged in, there is every reason to believe the State Sanitarium at Montrose enters on a new era of good work, and the campaign of education will be prosecuted with the vigor the doctor has shown in his previous work. As health officer of Asheville for the past four years Dr. McBrayer has accomplished great things for that attractive resort, among which the following may be enumerated as having been done during the period of his incumbency: Installing a new system of sanitary closets in the outlying districts, the publication of the monthly health bulletin, meat inspection, improved the methods of milk inspection, established certified milk, established a city laboratory, quarantine and release of diphtheria patients by laboratory methods, a new smallpox hospital, sanitary

cells in city jail, exhibit of Asheville's health department work at International Congress on Hygiene and Demography in 1913. In addition Dr. McBrayer has with ability served his State and the profession as a member of the North Carolina State Board of Medical Examiners during the past six years.

He has held other positions of honor in the State Medical Society and is highly esteemed as a physician and citizen of Asheville, and the Board of Health and the State are to be congratulated in securing him for this important work. J H. W.

WOOD ALCOHOL.

We frequently hear of fatalities resulting from the use of wood alcohol. Lately many suggestions have been made to prevent its unnecessary frequent employment. It has been suggested that its sale and use could be considerably checked if it were taxed from three to ten cents per gallon according to its refinement. This supervision would have to come under the Internal Revenue Bureau, a part of the Federal Government.

Wood alcohol is seldom used by alcoholics for internal use, its taste and odor are too repulsive for use in this way, but the refined products that are deodorized are frequently used internally, and many times it is difficult to distinguish the difference between grain alcohol and refined products of wood alcohol.

It has also been suggested that it would be well enough for all alcoholic products to be labeled, whether they are wood alcohol or grain alcohol, and their degree of refinement. Desperate unintelligent alcoholics have often suffered and been poisoned for the want of this knowledge. All druggists and pharmacists should label all kinds of wood alcohol as poisons.

TUBERCULOSIS IN INDIA.

That tuberculosis in India is on the increase is sustained by many competent observers. Among those are a number in attendance on the recent Congress of Hygiene of all India held at Lucknow. Particularly is this found to be present among that class of indoor workers often poorly fed and housed, underpaid clerks and students. This is not only so in the large cities but also in the villages. In the latter, in fact, are the laws of hygiene less understood and carried out than in the larger centers of population. The people are anxious for instruction on the lines of the prevention of tuberculosis. Education is necessary and sanitoria are required as much for this as for the treatment of the disease. They should be near, not in, the centers of population. The encouragement of tubercular hospitals and dispensaries was recommended by the Congress. The Government alone cannot control this scourge but must have the co-operation of the people. Dr. Lankester thought it would be well if some of the money spent on palatial educational buildings could be diverted to the less showy but not less necessary work of destroying buildings which were known as breeding places of tuberculosis. Tuberculosis preventoria were warmly recommended by Dr. Newell. Majors Sprawson and Cochrane in their papers recommended the providing of better buildings for the poor and for improved town planning. Dr. Wanless was sure that tuberculosis was greatly on the increase in India. Sanitaria should be constructed in such places so to be available for service throughout the whole year. He thought there should be tuberculosis shelters attached to every dispensary. Major Sprawson thought that tuberculosis wards were preferable to shelters, as a shelter, at least in some parts of India, could not be efficient unless protected on three sides from dust, wind and heat.

HEALTH IN THE CANAL ZONE.

It is remarkable how the health has improved in the Canal Zone during the last few years and it is, of course, all due to almost perfect sanitary regulations. It is quite difficult to believe in this typical tropical country that the death rate is much lower than it is in Memphis or New Orleans. Possibly it is equal if not better than it is in North Carolina. The statistics, or records, received from Colon and the Canal Zone show that the health conditions there have not changed materially in the last two years.

The principle diseases that are the most prevalent there are dysentery, malarial fever, pneumonia, and tuberculosis, the last two being seen quite frequently. For the last few months they have had no cases of smallpox or the plague.

INFANTILE MORTALITY IN INDIA.

Infantile mortality in India, as in other Oriental countries, is very high. This can be easily seen to be due to the prolonged high temperature, improper feeding, early marriages, poverty of the people, the dearness and the badness of milk and the ignorance of mothers and midwives. Calcutta has appointed a number of lady doctors for the prevention of infantile mortality and they, by their house to house visits and talks to mothers wherever they can be gotten together, have done very much good. In Bombay nurses have been appointed with each dispensary for house to house

visiting and for teaching mothers in many ways how to prevent the great infantile mortality.

Editorial News Items.

Construction work has begun on the Elizabeth City (N. C.) Hospital. It will occupy a beautiful location on the water front commanding a fine view of the bay, and is being constructed of red brick with stone trimmings, a pleasing semi-classic design with broad Corinthian porticos, surmounted with elliptic domes, with broad extending Spanish tiled roof. The general plan of structure, a Greek cross, is so placed as to allow sunlight in each of the fifty bedrooms. The mechanical equipment will be of the most approved modern character, and when completed it is expected it will equal the best in the South. Dr. John Saliba will be general manager.

Work on the initial unit of the new building for the Mission Hospital at Asheville, N. C., will begin shortly. It will cost $50,000, be of brick with stone trimmings, fireproof construction throughout, and with most approved equipment will afford, in addition to administrative space, accommodations for 60 patients. It is proposed to construct additional units from time to time as funds are available. The public have been assured by the management that a rotating staff will be one of the improved features instituted with the building of the new hospital.

The South Carolina State Legislature which has just adjourned passed a vital statistics law modelled afrer the United States standard bill, but it is reported as being still in the hands of the Governor, who has the option of signing it and making it in effect at once or of nullifying it by veto at any time within two days of the next annual session of the legislature.

The statute providing for medical inspection of schools in South Carolina passed the House and Senate readily, but was vetoed by the Governor, the legislature later sustaining the veto.

The South Carolina legislature appropriated the sum of $3,000 for the salaries and expenses of the State Board of Medical Examiners at its recent session. Later the Governor vetoed the bill, but the legislature in both houses overrode the veto.

An act passed by the last legislative session of North Carolina was recently brought to light at Asheville, and a citizen of that city was fined $25.00 for violating the statute in giving a drink of whiskey to an habitual drunkard, it being under the statute a crime punishable by fine.

Gov. Cole Blease of South Carolina has appointed Dr. W. L. Settlemeyer, of Gaffney, S. C., a member of the Board of Regents of the South Carolina State Insane Hospital.

Dr. B. E. Washburn, of Rutherfordton, N. C., recently of the hook-worm field force in North Carolina, has been elected whole-time county health officer of Nash county, N. C. Dr. Washburn is a graduate of the Universities of both North Carolina and Virginia, a young man of unusually fine equipment, and Nash county people are to be felicitated on the wisdom of their selection.

Dr. Albert Anderson, Superintendent State Hospital for Insane at Raleigh, N. C., entertained the Wake County Medical Society at dinner at the hospital on March 12, the occasion of the regular monthly meeting of the county society. A clinic on dementia precox was also held in connection with papers on the subject.

Dr. Frank Roberts, of Marshall, N. C., is spending three months in postgraduate study in Philadelphia and New York City.

Dr. W. B. Hunter, of King's Mountain, N. C., is doing postgraduate work in Johns Hopkins Hospital, Baltimore, Md., during March.

Dr. John L. Carroll, late of Asheville, N. C., a brother-in-law and professional associate for several years of the late distinguished specialist in tuberculosis and erstwhile member of the North Carolina State Board of Health and President of the North Carolina State Medical Society, Dr. James A. Burroughs, has located at Hookerton, N. C., and will specialize in tubercular diseases.

The death of Dr. Samuel A. Henley, of Asheboro, N. C., at his home on March 11, 1914, removes from an active professional life of more than fifty years a fine representative man of the good old North Carolina country doctor type. Studying at the Jefferson Medical College he began and continued through a well-spent life of more than fifty years service to the people of Randolph county. Born of Quaker parent-

age he had a birthright in the church of that faith in Back Creek and died triumphant in the Christian's faith. He was married first to Miss Eunice Roxana Rush, by whom four children survive him, among them Dr. F. A. Henley, of Asheboro. After the death of his first wife he wedded her sister, Mrs. Luella Rush Cranford, and to this union three children were born, two surviving. Dr. Henley's funeral was attended by an immense concourse of people, attesting the great worth and high esteem in which the friends of many years held the noble-minded practitioner who had for so long a period ministered to their woes. Peace to his memory.

The second annual clinical conference of the Seventh District (N. C.) State Medical Society was held in Charlotte, N. C., March 16 and 17. The sessions were well attended and the clinics at the various hospitals of the city instructive.

Spartanburg, S. C., has let the contract for the erection of a new general surgical hospital building to be first class in every respect and to be completed by Nov. 15, 1914, and to be known as the Steedly Hospital. Dr. B. B. Steedly will be chief surgeon with Dr. W. S. Zimmerman associate.

The James Sanatorium of Laurinburg, N. C., was awarded the sum of $317.85 in its action against the Yadkin River Power Co. in the Superior Court recently. In 1912 a young man named Flake who was in the employ of the Power Company was shot and the company's physician at Blewitt Falls carried the injured man to the sanitarium for treatment, stating at the time that the mother of the patient was a woman of property and requesting the sanitarium authorities to collect from her if possible. Failing to collect from the patient's mother Dr. James sued the power company with the result of recovering as above noted. The power company defended the action vigorously, proving the patient was off the premises of the defendant company and in an inebriated condition at the time of the reception of the injury. The case is appealed.

The North Carolina Democratic Executive Committee at a meeting in Raleigh on March 4th decided to hold the State convention at Raleigh on June 16. Next day when the press announced the news to that effect the Raleigh physicians recalled the appointed annual session of the State Medical Society at the same date and place, and the Raleigh hotel people protesting their inability to properly entertain both bodies at the same date, the State Democratic Executive Committee called another meeting and arranged for the holding of the political convention at a later date. We doff our hats to President J. M. Parrott and the other officers of the Medical Society for their proper management of the situation and we thank the Executive Committee of the party for their courtesy in the premises.

The urgent deficiency bill which has passed both houses of Congress contains an item of $47,000 for the pellagra hospital to be erected and managed under the direction of the United States Public Health Service. It is stated it will be located at Spartanburg, S. C., where the admirable study of pellagra which has been had at the hands of Surgeon J. F. Siler and his confreres will continue.

The decision handed down by the Supreme Court of Tennessee last week adjudging that the control of Vanderbilt University is vested in the Board of Trustees, which is in effect a self-perpetuating body, and not in the College of Bishops of the Methodist Episcopal Church, South, and that the legal trustees are the ones elected by the Board of Trustees three years ago, and not those elected by the College of Bishops, puts an end, to further litigation about the control of this great institution of learning. It also paves the way for the prosecution of the erection of the new hospitals and laboratories which the $1,000,000 donation of Andrew Carnegie provides for the Medical Department of the University in the event the Trustees were accorded control by the courts, as has just been done. It is hoped that all parties to the controversy over control, which has been in the courts for some three years past, will gracefully accept the court's rulings.

Dr. J. W. Babcock, Superintendent of the State Hospital for Insane at Columbia, S. C., has tendered his resignation to Gov. Cole Blease and it has been accepted. Dr. Babcock has filled the position since his appointment by Gov. B. R. Tillman in 1891 with much credit to himself and the institution as well. During the nearly twenty-three years of his incumbency there has been marked advances in psychiatry and the management of the insane, and Dr. Babcock has progressed with the best knowledge of the profession. His work in first directing the attention of the world to the fact that pellagra was a not infrequent disease in America, and his continued study of this important subject has placed our profession, and the public as well, under

lasting obligations to him. Whether he engages in private practice or in the conduct of an institution which it is said he proposes opening and operating wtth the assistanee of Dr. Elleanor Saunders, in Columbia, S. C., for the treatment of nervous disorders, Dr. Babcock carries the best wishes of those most competent to judge of his professional fitness for his future success in every laudable undertaking.

Gov. Blease of South Carolina has appointed as Superintendent of the State Hospital for Insane at Columbia to succeed Dr. J. W. Babcock, resigned, Dr. Thos. J. Strait, of Lancaster, S. C. Dr. Strait is a graduate of the Charleston Medical College of the class of 1885. He has figured more or less actively in South Carolina State politics for some time, was a State Senator during the recent session of the legislature and served as a member of the legislative committee which at the instigation of Governor Blease conducted an elaborate investigation into the affairs and management of the insane hospital.

Dr. Elleanor B. Saunders, formerly assistant physician at the State Hospital for Insane at Columbia, S. C., and resigned recently when Dr. J. W. Babcock retired from the superintendency of the institution, has been presented with a beautiful loving cup by the ladies of Columbia in token of their appreciation of her splendid and devoted work to the unfortunate women in the institution during her stay at the insane hospital. She will remain in Columbia as Dr. Babcock's associate in the new institution for the treatment of nervous diseases he is shortly to open.

Dr. T. A. Allen, of Hendersonville, N. C., died with acute pneumonia while visiting his daughter in Columbia, Tenn., on March 11, 1914, after a brief illness of a few days, at the ripe age of 89 years. He was a practitioner of medicine for more than fifty years in Henderson county, N. C. Dr. Allen was widely known as a capable and kindly practitioner of medicine, a consistent communicant of the Methodist Episcopal Church, South, and a gentleman unusually versed in the local history of the mountain section of North Carolina.

The death at his home in Danville, Va., on March 1st, 1914, of Dr. Wm. Laville Robinson removes one of that city's most beloved physicians and honored citizens. A native of Cumberland county, Va., he entered the Confederate Army at the age of 17 and served his country with bravery until wounded and made prisoner at Mitchell's Station. Later he was graduated from the University of Virginia and engaged in practice in Danville. Dr. Robinson won not only the respect and admiration of a large clientele, but also enjoyed numerous honors at the hands of his professional associates. He was President of the Medical Society of Virginia, President of the Tri-State Medical Association of the Carolinas and Virginia. He was also a member of the Virginia State Board of Medical Examiners. He is survived by four children, among them being Dr. Julian M. Robinson, who was his father's professional associate for several years past.

Dr. Wm. Lloyd Gratham, of Lumberton, N. C., has returned home after six weeks spent in postgraduate work in New York City.

Dr. Carl V. Reynolds, of Asheville, N. C., has been City Health officer at Asheville to succeed Dr. Lewis B. McBrayer, resigned and removed to the State Sanitarium for Tuberculosis at Montrose, N. C. Dr. Reynolds is one of the famous resort city's best known medical men, was formerly health officer, and in his capable hands the splendid record made by his predecessor will be fully maintained and Asheville's reputation as one of the cleanest and most sanitary cities in the world sustained.

A substantial addition to the building of the Merriwether Hospital at Asheville, N. C., is under arrangement by the stockholders.

The City Council of Wilmington, N. C., has decided to increase the annual appropriation to the James Walker Memorial Hospital. The appropriation heretofore has been $6,000 from the city and $9,000 from the county. An increase of $5,000 is asked by the hospital and it is understood will be authorized.

The hospitals of Raleigh, N. C., received at the hands of the municipal court last week a few hundred bottles of fine liquors confiscated by the court from five negro druggists convicted of illegal selling of alcoholics. The additional fines imposed netted the city of Raleigh a little less than $3,000.

Dr. M. Hall Fletcher, of Asheville, has been appointed local surgeon Southern Railway.

In 1913 a convict in Wake county, N. C., after being whipped because he would not

perform manual labor, died in a few hours. The post-mortem made by medical men outside the State's service found the death due to causes unconnected with the whipping. The case was carried to the Supreme Court which has just decided it is illegal to whip a convict in North Carolina.

Dr. W. S. Jordan, of Fayetteville, N. C., has resumed practice after a few weeks spent in Philadelphia doing post-graduate work.

Dr. W. L. Hudson, late of Dunn, N. C., has removed to Rock Branch, near Fayetteville, N. C.

Dr. W. W. Whittington, of Snow Hill, N. C., has returned to his practice after a post-graduate trip to Eastern cities.

Dr. Clyde E. Cotten, of Black Mountain, N. C., has removed to Asheville, N. C., where he will practice.

Dr. W. T. Parrott, of Kinston, N. C., while cranking his automobile recently, sustained a fracture of the forearm and two ribs.

Dr. R. G. Blackburn has been placed in temporary charge of the work at State Park, Columbia, S. C., by the Board of Regents of the State Hospital for the Insane, while Dr. Margaret Whitesides of Chester county, S. C., has been selected lady resident physician. It is stated that both appointments may become permanent.

Dr. Thos. J. Ellis, resident physician at the Telfair Sanitarium in Greensboro, N. C., died at the institution after a brief illness of only an hour on March 26th. His remains were interred at his old home in Amherst, Va., from which town he had come to Greensboro four years ago.

Banquet to Dr. L. B. McBrayer.

On the evening of March 28th at Asheville, N. C., the members of the Buncombe County Medical Society tendered Dr. Lewis B. McBrayer, recently City Health Officer of Asheville, a farewell banquet on the eve of his leaving Asheville, after a professional residence since 1889, to assume the Directorship of the State Sanitarium for Tuberculosis at Montrose, N. C.

Covers were laid for 50, and the festive board was gracefully presided over by Dr. Paul H. Ringer, President of the Buncombe County Medical Society. A very agreeable menu was served and a number of very happy addresses were delivered by admiring friends. Universal regret was manifested by all at Dr. McBrayer's departure and the State Board of Health congratulated on securing him to head its tuberculosis work. Leaving, as Dr. McBrayer does, one of the most delightful cities of the South in which to reside, a community where he has built an enduring reputation, and a devoted clientele, the pronounced note of the occasion was the spirit of altruistic influence, influencing the doctor in engaging to devote himself to the State's new work. Dr. J. Howell Way, President of the State Board of Health, was present as an invited guest.

Dr. Christopher C. Walker, of Gainesville, Texas, who was a graduate of the Medical Department of the Tulane University of Louisiana, New Orleans, died on February 24 at Los Angeles, Cal., where he had gone in search of health, aged 73 years.

The Ninth District Medical Society of North Carolina held its third annual convention in Statesville, N. C., Friday, April 10. 1914. The officers are: Dr. C. M. Van Poole, Salisbury, N. C., President, and Dr C. Banks McNairy, Lenoir, N. C., Secretary. The following papers were read by the various physicians and surgeons and received free and intelligent discussion:

Paresis; the Importance of its Early Recognition, Dr. J. K. Hall, Richmond, Va.

Neurasthenia, Dr. C. A. Julian, Thomasville.

Goiter and Hyperthyroidism, Dr. A. G. Brenizer, Charlotte.

Nasal Obstruction, Dr. F. A. Carpenter, Statesville.

Rupture of the Uterus During Labor, Dr. J. W. Long, Greensboro.

Treatment of Pellagra, Dr. W. W. McKenzie, Salisbury.

A Supposed Case of Rheumatism, Dr. I. W. Faison, Charlotte.

Public Health, Preventive Medicine, Vital Statistics, Dr. W. S. Rankin, Raleigh.

Dr. W. T. Rainey, of Salisbury, N. C., recently house physician to the Highsmith Hospital in Fayetteville, N. C., was operated on for appendicitis March 26 by Dr. J. F. Highsmith.

Dr. Russell Bellamy, of Wilmington, is being strongly urged for the Democratic nomination for Congress in the Wilmington. N. C., district,

The city of Asheville, N. C., is to be congratulated in the wisdom manifested in the selection of a health officer to succeed Dr. L. B. McBrayer, whose splendid work had

attained so high a degree of excellence. Dr. Carl V. Reynolds, who assumes the duties of the position, is one of the city's most accomplished general practitioners, a man of culture and wide professional experience he brings to the responsible duties of the health officer, ability and attainment far above the average physician who accepts a position of this sort. His selection emphasizes the wisdom and intelligence of a community that has learned that public health officials should come, not from the ranks of the youthful, immature and inexperienced physicians just starting out in life, the "briefless barrister" type, but be selected with care and capable caution, if possible, from among the very best medical men of the community.

The Eighth District Medical Society met in Greensboro April 2nd. Dr. Charles Waddell Stiles, of the United States Marine Hospital Service at Wilmington, addressed the joint meetings of the Eighth District Medical Society and the Guilford County Medical Society. His subject was "Public Health." The speaker has had an abundance of experience and every paragraph of his address exhibited evidence of this statement. There were four sessions, two on Thursday and two on Friday. The following papers were read and discussed:

Rupture of the Uterus, Dr. J. W. Long, Greensboro.

Cancer From the Standpoint of a Layman, Dr. W. F. Cole, Greensboro.

Symposium of Pellagra, Dr. C. W. Moseley, Greensboro.

Ludwig's Angina, Dr. J. T. Burrus, High Point.

Conservation of the Vision, Dr. C. W. Banner, Greensboro.

Care of the Child from Infancy to School Age, Dr. Chas. Roberson, Greensboro.

Friday night a banquet was tendered to the physicians and surgeons who were in attendance. During the meetings several clinics were held.

During March the offices of some five or six well known Asheville, N. C., physicsicians were burglarized and instruments and microscopes stolen without leaving any clue to the thief.

The McDaniel Memorial Hospital of Kinston, N. C., has been changed to the Parrott Memorial Hospital with an authorized capital stock of $75,000, and papers of incorporation under the new name issued to Drs. J. M. and W. T. Parrott of Kinston, N. C. An additional building of brick and stone is being added to house the nurses and afford additional surgical space.

Dr. I. M. Taylor, of Morganton, proprietor of Broad Oaks Sanitarium at that place has recently purchased the attractive suburban place near Morganton known as Catawba Heights and will convert the property into an additional sanitarium.

Dr. T. A. Norment, of Lumberton, N.C., has resumed practice after a professional absence of some months.

Dr. J. H. Moore, of Whitmire, S. C., has located for the practice of his profession in Laurens, S. C.

BOOK NOTICES.

A Treatise on Diseases of the Skin. For the Use of Advanced Students and Practitioners. By Henry W. Stelwagon, M.D., Ph.D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Seventh edition, thoroughly revised. Octavo of 1250 pages, with 334 text-illustrations, and 33 full-page colored and half-tone plates. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $6.00 net; Half Morocco, $7.50 net.

The past several years have been a period of active investigation in several of the chief dermatologic diseases, notably syphilis, leprosy, sporotrichosis, pellagra, ringworm, and tropical affections, and the results of such investigations, partly considered in the edition of 1910 of this work, are much more fully presented in the present volume. In many of the other diseases besides those just named new facts, some of considerable importance, have also been brought forward and likewise incorporated. Descriptions of new or more or less recently acknowledged independent disorders are presented for the first time, among them being benign sarcoid, prurigo nodularis, granuloma pyogenicum, and keratosis blenorrhagica. The value of illustrations has again been recognized by the addition of about forty new cuts, the most important being several of leprosy, prurigo nodularis, lupus vulgaris, Oriental sore, dermatitis vegetans, and the ring type of impetigo.

Manual of Obstetrics. By John Osborn Polak, M.Sc., M.D., Professor of Obstetrics and Gynecology in the Long Island College Hospital; Professor of Obstetrics, Dartmouth Medical School; Obstetrician to the College Hospital; Fellow of American Gynecological Society, New York Obstetrical Society, etc. With three color plates and one hundred and nineteen illustrations in text. New York and London: A. Appleton & Company. 1913.

This volume places the essential facts and principles of obstetrics within the easy grasp of the student. It is a systematic introduction to the more elaborate treatises and a guide in following the didactic and practical teaching of the college course. Principal attention has been given to practical topics. Theoretical discussions, matters of merely historical interest and elaboration of details have in the main purposely been excluded.

It is a volume of 468 pages of text. The index has been quite carefully prepared and adds value to the book.

Pathogenesis of Salvarsan Fatalities by Sanitats-Rat. By Dr. Wilhelm Wechselmann, Directing Physician of the Dermatological Department, Rudolph Virchow Hospital in Berlin. Authorized translation by Clarence Martin, M.C., First Lieut. M.R.C., U. S. Army; Late Clinical Assistant St. Peter's Hospital for Stone and Other Urinary Diseases, London; Member Association Military Surgeons, Berlin Urological Society, etc., St. Louis, Mo. The Fleming-Smith Company, Medical Publishers, St. Louis, Mo.

The writer calls attention to what role salvarsan and its companion preparation, neosalvarsan, are to play in the future therapeutics of syphilis; whether they are to remain the principal form of treatment of this disease, and whether they possess sufficient spirillocidal power to warrant their unaided employment, are points that the clinical investigations of Professor Wilhelm Wechselmann alone will determine. His vast experience with salvarsan entitles his conclusions on any phase of salvarsan-therapy to the most respectful consideration, and his investigations into the causes of salvarsan fatalities cannot but aid in large measure in fixing salvarsan's degree of toxicity and the bodily factors involved in the fatal process. While it is true that conclusions reached at the present time are subject to revision, for, confessedly, the last word on salvarsan is far from having been written, yet it is safe to assume that much of our present-day knowledge of salvarsan-therapy is sound and worthy of reliance. The translator of this little book has certainly done his work well, and the physicians interested in the treatment of syphilis by salvarsan and neosalvarsan will find in these pages much food for thought.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pædiatrics, Obstetrics, Gynecology, Orthopædics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U. S. A., with the collaboration of eleven prominent doctors. Volume 1. Twenty-fourth series, 1914. Philadelphia and London: J. B. Lippincott Company. Price $2.00.

The subject matter of this volume is given under four main heads: Treatment and Therapeutics, Medicine, Surgery, and Progress of Medicine During the Year 1913. The last subject is treated by Henry W. Cattell, A.M., M.D., James W. Walk, A.M., M.D., and Samuel M. Wilson, and is especially interesting.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College of Philadelphia. Assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College of Philadelphia. Volume 1, March 1, 1914. Lea & Febiger, Philadelphia and New York, 1914. $6.00 per annum.

This volume comes up to its usual high standard in the way of valuable papers. The table of contents for this month is as follows:

Surgery of the Head and Neck, Chas H. Frazier, M.D.

Surgery of the Thorax, Excluding Diseases of the Breast, George P. Muller, M.D.

Infectious Diseases, Including Acute Rheumatism, Croupous Pneumonia, and Influenza, John Ruhrah, M.D.

Diseases of Children, Floyd M. Crandall, M.D.

Rhinology and Laryngology, Geo. B. Wood, M.D.

Otology, Arthur B. Duel, M.D.

Irritability. A Physiological Analysis of the General Effect of Stimuli in Living Substance. By Max Verworn, M.D., Ph.D., Professor of Bonn Physiological Institute. With diagrams and illustrations. New Haven: Yale University Press. London: Henry Frowde, Oxford University Press. MCMXIII. Price $3.50, postage 20c. extra.

The lectures on irritability here published were held at the University of Yale in October, 1911, and constitutes the ninth of the series of Silliman Memorial Lectures. In them the author presents a uniform ex-

position of the general effects and laws of stimulation in the living substance. He has systematically investigated the general laws of the effect of stimulation and has combined and elucidated his results in his lectures. This volume will be of interest to the physiologist, the zoologist, the botanist, the psychologist, and the pathologist, as they all have to deal, day in, day out, with the effects of stimulation on the living substance.

State Board Questions and Answers. By R. Max Goepp, M.C., Professor of Clinical Medicine at the Philadelphia Polyclinic. Third Edition, Thoroughly Revised. Octavo volume of 717 pages. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, $4.00 net; Half Morocco, $5.50 net.

The second edition of this book, which appeared two years ago, was considerably enlarged by the addition of a number of questions bearing on certain subjects which have assumed importance during the last few years, such as serology and, particularly, serum and bacterin therapy, for which the field is steadily widening, both in diagnosis and treatment; chemotherapy and the recent innovations in the treatment of syphilis; tropical disorders and other diseases caused by animal parasites; and, finally, the newer cardiac physiology and the graphic methods of studying the phenomena of the circulation. These subjects have been still further developed during the past two years, and some additions, as well as corrections, were found necessary even here. Some superfluous material has been eliminated, some new questions added and the whole book has been gone over carefully with the result that we have a still more valuable work on this subject.

A Synopsis of Medical Treatment. By George Cheever Shattuck, M.D., Assistant Physician to the Massachusetts General Hospital. Second Edition, Revised and Enlarged. Boston: W. M. Leonard, Publisher. 1914. Price $1.25.

In this edition, as in the first, completeness has been sacrificed for brevity but new material has been added and many changes have been made. More reliance than before has been placed on personal experience, but the information about salvarsan was derived, chiefly, from recent literature. The work offers clearly and concisely sound principles of treatment based on known pathology.

Infection and Immunity. Including Chapters on Serum Therapy, Vaccine Therapy, Chemotherapy and Serum Diagnosis. For Students and Practitioners. By Charles E. Simon, B.A., M.D., Professor of Clinical Pathology and Experimental Medicine at the College of Physicians and Surgeons; Pathologist of the Union Protestant Infirmary and the Hospital for the Women of Maryland; Clinical Pathologist to the Mercy Hospital of Baltimore, Md. Second Edition, Revised and Enlarged. Illustrated. Lea & Febiger, Philadelphia and New York.

The fact that the first edition of Infection and Immunity has been exhausted within a year indicates the interest with which the general practitioner is meeting the marvelous advances of modern experimental medicine. In preparing this new edition the author has embodied the most notable achievements of the past year, and has thus added sections on auto- and normal serum therapy, on the chemotherapy of pneumococcus infections and of cancer, on the serum diagnosis of pregnancy, etc., besides giving the entire work a careful review.

Anatomy and Physiology for Nurses. By Amy E. Pope, Author, with Anna Caroline Maxwell, of "Practical Nursing," and Instructor in the School of Nursing of the Presbyterian Hospital in the City of New York. With 135 illustrations. G. P. Putnam's Sons, New York and London. The Knickerbocker Press 1913.

This work was prepared especially for the nurses, with the idea of giving the instruction necessary to enable them to render intelligent and interested assistance in the research work which is such a large item in hospital routine, and to do the teaching of hygiene and sanitation expected of them in connection with social-service work. The facts relating to this subject, which are of the most importance to nurses, have been collected from the latest authorities on physiology and put into concise and simple language.

Medical Gynecology. By S. Wyllis Bandler, M.D., Adjunct Professor of Diseases of Women, New York Post-Graduate Medical School and Hospital. Third Thoroughly Revised Edition. Octavo of 790 pages, with 150 original illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $5.00 net; Half Morocco, $6.50 net.

In every department of medicine the importance of the internal secretions is acquiring a more general recognition. In recent works, especially in Germany, we have the highest proofs of the close interrelations existing between the genital tract of women and the various internal glands, and in these pages the author has added much on the relation of the various glands produc-

ing internal secretions to pathologic and normal states in women.

The work is quite up-to-date and interesting. It has given the reviewer much pleasure to look through it.

The Practice of Pediatrics. By Charles Gilmore Kerley, M.D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital. Octavo of 878 pages, 139 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $6.00 net; Half Morocco, $7.50 net.

The writings of Dr. Kerley have for a number of years been greatly appreciated by the entire medical profession, not only in this country but all over the English speaking world. Much of his writing has been translated into German and French.

This volume is the most extensive work that the author has ever written. It is quite complete in every respect. The subjects are fully covered and the illustrations, numbering about 140, are especially good. Certainly all specialists and practitioners ought to consult this work frequently. It is one of the best books of its kind that has been published recently.

The Art of Today.

A thoughtful and sincere attempt to sum up the situation in art today is to be made in The Century Magazine for April. The editor says that a revolution against settled art standards is now in full career and "it is time that we study signs, seek to define directions, and somewhat forecast the convention that is to come."

Under the general heading of "This Transitional Age In Art" have been gathered five authoritative papers, covering every phase of the subject and profusely illustrated with more than fifty pictures, some of them in full colors. The subjects are: I. "Is Our Art Distinctively American?" by John W. Alexander, President National Academy of Design; II, "The Painting of Today," by Edwin H. Blashfield, President Society of Mural Painters; III, "The Painting of Tomorrow," by Ernest L. Blumenschein; IV, "The Point of View of the 'Modern'" by Walter Pach; V, "The Ancestry of Cubism," by Jay Hambidge and Gove Hambidge.

The Literacy Test of Immigrants.

The Senate Committee on Immigration, under the chairmanship of Senator Smith of South Carolina (who has succeeded Senator Dillingham of Vermont, now that the Senate is Democratic), decided in the middle of February to report the Burnett bill without delay, and put it upon its passage. This meaes, of course, that the bill will go through the Senate by a very large majority, and that its fate will rest with President Wilson alone. So many things have happened within a year that many of our readers may be pardoned if they do not remember clearly the circumstances under which this same bill was passed by Congress and vetoed by President Taft within a few days before his retirement from office. A great commission of inquiry, appointed by President Roosevelt, had spent several years studying the immigration question in America and Europe, under the chairmanship of Senator Dillingham. Representative Burnett of Alabama, now chairman of the House Committee on Immigration, was also a member of that commission. Professor Jenks, Dr. Neill, and other scholarly students were members. The Burnett-Dillingham bill passed the Democratic House by majorities of 3 or 4 to 1, varying upon different clauses. Almost the entire Senate supported the measure. Mr. Taft, in vetoing it after some vacillation, supported himself by a letter from Secretary Nagel, of the Department of Commerce and Labor, opposing the literacy test. It was undertaken to pass the bill over the President's veto, and 72 Senators favored this, with only 18 supporting Taft. In the House 213 members sustained the bill, and 114 supported the veto. Thus the bill was lost, because a two-thirds majority is required to pass a measure over a veto. Certain influences had caused thirty or forty members of the House to change their votes. As the matter now stands, if President Wilson should veto the bill, he would not be sustained by the Senate; but it would be impossible to hold together the present two-thirds majority of the House as against the President's position, and the bill would fail. —From "The Progress of the World," in the American Review of Reviews for March.

The Revolt of the Women.

The time has come to define feminism.

That is the opinion of Robert Sterling Yard, editor of the Century Magazine, who believes that feminism can no longer be ignored.

"The germ is in the blood of our women," says Mr. Yard in the April Century, under the heading "The Revolt of the Women." "The principle is in the heart of our race. The word is daily in the pages of our newspapers. The doctrine and its corollaries are on every tongue. The hope of it, often unrecognized and denied, lies inherent in the soul of every woman. The dread of it rests heavily upon the ignorant, the timid, the

unduly conservative, and those who have outlived the capacity for unfamiliar thinking.

WHAT FEMINISM IS NOT.

"But what is feminism? Is it, as the superficial allege, the desire of some women to assume the work and the places and the power and the responsibilities and the rewards of men? Some women desire these things, no doubt. But this is not feminism.

"Is it the desire of a few experimental spirits to abolish marriage, and substitute for lifelong monogamy temporary relationships dissoluble at will? This is the dream of a scattered few, especially in Germany, where a small group is experimenting in public. But it is not feminism.

"Is it the suggestion of certain reckless ones to abolish the home and have the State bring up our children in order that women may be free to experiment variously with life unhampered by the schemes of mere nature? This has been seriously set forth by several daring writers, and is occasionally advocated by irresponsible orators at gatherings of the ultra-advanced. But it is not feminism.

"Nor can feminism be defined by any of the numerous other suggestions of impractical imaginations spurred to abnormal activity by sudden release from the thought conventions of the past.

"Granted that most of the so-called feminist writing and speaking so far have dealt with the schemes of visionaries. But visionaries and fanatics are always the first and the loudest in any public cause. The social reorganization now in slow, orderly progress throughout the civilized world was heralded two decades ago by anarchists and nihilists.

"Granted that the opponents of feminism seem to have, in the silence of all others, authority for their assumption that the theories of these hasty irresponsibles are the theories of the movement itself. But the hastily terrified are as fatuous as the hastily enthused. Neither deserves credence of the seer."

A Springtime St. Nicholas.

There is a strong out-of-door flavor in the April number of the "best-loved of all magazines." St. Nicholas continues the articles by Billy Evans, the peerless league umpire, who describes the superstitions of ball players. "The Boys' Fishing Kit," one of the "Under the Blue Sky" series, by E. T. Keyser, is enough to start the reader down the road to the nearest fish pond. Francis Ouimet, national golf champion, continues his series on "The Game I Love." The boys in "With Men Who Do Things" visit the Keokuk Dam across the Mississippi. Grace Tabor has an article in her series on "Garden Making." "When the Indians Came" is a story full of boys and red Indians.

In the Nature and Science Department there is an article on flowers and trees, and another on electro magnets that lift immense weights of metal. The St. Nicholas League Competitions include prize pictures for the best photograph entitled "In the Sunshine," and one of the serials, "The Runaway," has an installment in which a girl and a boy suffer a thrilling canoe accident. There is a painting in full colors by the famous artist, Arthur Rackham, and the whole number is, as usual, profusely illustrated. Even the installment in "The Housekeeping Adventures of the Junior Blairs" describes a picnic, including the recipes of the edibles and drinkables that were taken along. In fact, there is hardly anything about this bright number except Hildegarde Hawthorne's delightful department, "Books and Reading," that does not express springtime and out of doors.

A New Story by Kipling.

Rudyard Kipling, about whose health reassuring cable messages have just been received from Paris, contributes his lates story "The Dog Harvey" to the April Century, a tale with a touch of the supernatural in it.

Abstracts of the Leading articles of the month.

The Etiology of Syphilitic Hemiplegia. —Mackinnon, in The London Medical Lancet, says concerning the etiology of this state, that it is well known that the vascular lesion, which is the commonest cause of this condition, is the obliterating endarteritis, a condition which may be found in a number of smaller arteries throughout the body, but most frequently in the smaller terminal arteries of the brain. The pathological change affecting the vessel walls begins as a proliferation of the adventitia. The increase of newly formed fibrous tissue frequently tends to the formation of a thrombus in the contracted lumen of the vessel, and according as to whether the thrombus partially or completely obliterates the lumen of the terminal artery the result is a hemiparesis or a complete hemiplegia. There may be a condition of unilateral numbness and tingling during the stage of partial obliteration due to the ischæmia of the part of the brain supplied by the obliterated vessel, and this condition may precede for several

hours, or even days, the onset of sudden paralysis. This paralysis may readily be recovered from if the case is seen and diagnosed sufficiently early to allow of the appropriate antisyphilitic remedies being freely administered. Fortunately this is the result of treatment in most cases, but in a few the paralysis is permanent, on account of delay in treatment and the degeneration and softening of that part of the nervous system deprived of its blood supply. These vascular lesions are described as the early tertiary or late secondary manifestations of syphilis.

The Use of Radium in Malignant Disease.—Abbe (London Lancet) says that it has been shown by experiments on flowering seeds that radium rays exert three different effects: (1) Destruction of life; (2) stimulation; (3) depression and retrograde change. It is the third effect that should be sought in treating disease.

He has studied radium treatment in more than 750 cases, including 250 epitheliomas, 180 carcinomas of the tongue, throat, esophagus, rectum, breast, uterus, etc., fifty sarcomas of the skin, parotid, bones, etc., besides other conditions. The Dr. thinks his numerous failures due to inadequacy in amount of treatment or failure to use the proper rays.

The author has had most brilliant results in papillomata of all parts of the body, and especially in those situated on the vocal chords, having had eight cases all successfully cured. The results in epithelioma have been good, also in some malignant ulcerating growth extending beneath the skin surface, it being best to reduce the diseased tissue to a minimum before applying the radium.

The Dr. advocates its use in those cases of malignant growths beginning at the nipple, which are a type of epithelioma. If these are taken early they can be cured by radium.

In the worst types of breast and uterine cancer in women, and cancer of the tongue, esophagus and rectum in both sexes he thinks some headway has been made. Growths of the tongue and esophagus show marked though temporary reduction. In rectal cancer the patient may live in comparative comfort for several years under very heavy doses, there being as yet no cures.

The field of uterine cancer offers more hope. It is certain that the effect of extreme radiumization in cancer of the cervix or of the scar after operation tends to alter the disease by replacing it with sound cicatrix. Several cases of cervical cancer treated with curettage and immediate radium treatment have remained well from three to eight years. Certain foreign observers report the same results. Even in the field of uterine fibroids the results in two cases seem favorable.

In sarcoma the writer mentions a case of the round-celled type on the eyelid which rapidly disappeared under radium after resisting the x-ray, which has remained cured nine years. In giant celled sarcoma of the bone he has achieved some remarkable results by imbedding tubes of radium in the mass, and also reports a cure of pure myeloid sarcoma of the bone.

Observations on the Surgery of the Spleen.—Bland-Sutton (British Journal of Surgery) mentions a few conditions justifying the removal of the spleen. "Injuries, such as rupture, stabs, gunshot wounds, and the like, for they endanger life from hæmorrhage. (2) When enlarged and mobile the spleen is dangerous to itself, and may interfere with other viscera. (3) When the seat of malignant disease, or occupied by an echinococcus colony, or cystic from causes none can tell. (4) Splenomegaly (great spleen) associated with changes in the number, as well as in the relative proportion, of the blood corpuscles, such as exist in the conditions known as anæmia and the conglomerate group covered by the term Banti's disease. (5) Morbid conditions, blood-borne, such as abscess due to the lodgment of septic emboli, tuberculosis, infarcts, and thrombosis of the splenic vein. (6) Among exceptional conditions justifying removal of the spleen may be mentioned aneurysm of the splenic artery." Involvement of the spleen in tumor growths may also require its removal.

Among the most frequent causes of rupture of the spleen are kicks, blows, falls upon pointed or angular objects, crushing injuries, stabs and bullet wounds. Often there are other complicating injuries. Malarial spleen is easily ruptured. "The signs of severe injury to the spleen are those incidental to internal bleeding: Pallor, dilated pupils, coldness of the skin, and rapid failure of the pulse." When the rupture involves the splenic artery or vein, rapid death from loss of blood is the rule. Treatment should be prompt and usually by splenectomy. Gauze packing and drainage have answered in some cases, but experience has shown that splenectomy is the best way of treating such cases.

The spleen is sometimes so movable that it can be brought in contact with any part of the abdominal and pelvic cavities. This excessive mobility brings about changes in the spleen and in other viscera, especially the pancreas, which has sometimes been so

stretched that the tail has reached to the pelvis, and the tail of the pancreas has been included in the pedicle when doing a splenectomy. The stomach, small intestine, colon, sigmoid flexure and appendix have been entangled in this way. Wandering spleens have been mistaken for tumors of various kinds and especially for movable kidney and hydronephrosis.

Among the enlargements of the spleen due to blood-borne infections the Dr. considers (1) abscess, (2) malarial spleen, (3) tuberculous spleen, (4) syphilitic spleen, (5) echinococcus disease of the spleen. Malarial spleens have been removed many times and with only indifferent success. Attention has been called to the frequency with which splenic abscess occurs in patients with malarial cachexia.

Hydatid cysts of the spleen may be single or multiple. They may give no symptoms. Splenectomy for this condition is rare, most of the recorded cases having been incised and drained.

Regarding splenomegaly, he says that "this is a useful title to cover a number of splenic enlargements following a disturbance of its function excited by causes at present unknown." Disturbances in hepatic function and jaundice may be present. Enlarged spleen may be associated with opposite blood conditions such as erythræmia and anæmia. The degree of enlargement varies, the lower pole sometimes reaching the iliac fossa. The clinical features of erythræmia are plethora, cyanosis and splenomegaly. Leukæmia is also associated with splenomegaly. In erythræmia and leukæmia surgery has no place. There is also a conglomerate group known as Banti's disease. The leading features of this group are: splenomegaly associated with a reduction in the number of the blood corpuscles, red and white, and, in the later stages of the disease, with cirrhosis of the liver, occasional jaundice and ascites. It is difficult to distinguish Banti's disease accurately—especially when its later stages are complicated with gastric hæmorrhages —from a group of symptoms set up by thrombosis of the portal vein. Any disease which interferes with the portal vein causes enlargement of the spleen: for example, cirrhosis of the liver, gummata, and tumors which interfere with the portal vein. Obliterative thrombosis of the splenic vein leads to splenomegaly and hæmatemesis. When the vomiting of blood is profuse, surgeons are apt to overlook obstruction of the splenic vein as a cause.

He says accessory spleens need not be sought for. Sometimes the spleen consists of a number of distinct portions, and in one case described by Albrecht a spleen the size of a walnut was present in the usual position, and supplied by a normal splenic artery and vein, while an immense number of small supernumerary spleens were sprinkled throughout the abdomen. As a rule patients suffer no more inconvenience after splenectomy than after ovariotomy; but sometimes there has been a rise of temperature a few days after the operation, accompanied by loss of flesh, pain in the long bones, especially those of the lower limbs, diminution in the number of the red, and increase in the number of white blood cells. In all cases these untoward symptoms have gradually subsided.

He says that by an analysis of reported cases certain important facts have been established: (1) The removal of the spleen in patients with leukæmia is the most fatal operation in surgery. Probably no leukæmic patient has recovered from this operation; death is due to uncontrollable bleeding or shock. (2) Splenectomy for wandering spleen is accompanied by the same risks that beset an uncomplicated ovariotomy. (3) The removal of a malarial spleen is attended with a great risk: probably 30 per cent. when the spleen lies in its normal position; but if free and mobile, the risks approximate to those attending a straightforward ovariotomy. (4) The risks attending the removal of enlarged spleens in the category of splenomegaly associated with anæmia are great; but the death rate varies with the skill and experience of the operator.

What the General Practitioner Should Know About Gonorrheal Iritis.—Harrell (New Orleans Medical and Surgical Journal) says the object of his paper is to bring before the profession a subject that seems to be almost wholly unrecognized by the general practitioner, and one about which the specialist has had less to say than the gravity of the disease would seem to warrant.

Unlike gonorrheal ophthalmia, it is brought about by the spread of gonorrheal bacteria or toxins throughout the system, and not by direct inoculation.

Two forms of the disease are described—an acute, non-relapsing, and a more subacute or chronic relapsing form. According to the experience of our best authorities who have made special study of this subject, in a certain percentage of cases of gonorrhea which begin as a local, specific urethritis, there occurs an absorption of bacteria or toxins from the urethra which invade the entire system. Most of these cases manifest themselves at first in the form of a gonorrheal arthritis of one or more joints, but we may have pericarditis, endo-

carditis, peritonitis, or meningitis. Harrell uses the word arthritis in contradistinction to rheumatism, as is often used, because it is not in any sense a rheumatic affection. This places the affection of the eye in a class by itself.

The disease generally accompanies or follows an attack of gonorrheal arthritis, but not always. We sometimes have the affection come without any joint disease. Collins says when the system is once invaded by gonorrheal toxins the patient is not entirely free from a liability of attacks of iritis for a period of ten years.

The affection in many respects is not unlike the other forms of iritis, but taking into consideration the elective affinity of these toxins, or germs, it is probable that we have to deal with more than a simple iritis; but in most cases with an iridocyclitis, a plastic iridochoroiditis, or uveitis. It is quite possible for us to have the affection begin in the deeper structures of the eye, the iritis coming on as a secondary affection. When the disease attacks the deeper structures, there is usually a free exudation, and sometimes the pupil is occupied by a considerable mass of bluish-gray lymph. Its onset is sometimes marked by fine, dotted deposits upon the posterior surface of the cornea and opacities in the vitreous. This lowers the vision very materially in some cases, and each subsequent attack furnishes more of these exudates, increasing the loss of function, and in many cases these deposits never clear up entirely, but remain to interfere with the full function of the eye. He mentions a case he had four years ago which had one relapse, during which time the vision went down very low, he being able to see fingers only at about three feet. After convalescence set in his vision improved rapidly, but has never reached quite the normal. This case, which was treated the first two weeks by a general practitioner, still has the exudates in the vitreous, and a slight posterior synechia.

In the local treatment of these cases atropine, collyria, and hot compresses are used. Dionin in solution of 10 per cent. instilled twice or three times daily is one of the best remedies we have, as its first effect is to bring about a great increase in the blood supply to the eye, followed by a recession, producing a drainage that opens up the lymph spaces and relieves the eye of a certain amount of the diseased process, and also assists in the control of pain. The constitutional treatment consists in the use of the antigonococcic serums and vaccines.

Gonorrheal phylacogen, a serum originated by Schafer, is a remedy upon which very favorable reports have been made in the treatment of this disease.

The Diagnosis and Treatment of Granular Kidney.—West, in The London Lancet, states that granular kidney is a form of chronic interstitial nephritis, yet all forms of chronic interstitial nephritis, even if bilateral, are not granular kidney. For instance, the gouty kidney, so-called, is a mixture of interstitial fibrosis with cell degeneration, yet gout has nothing essentially to do with granular kidney, for even in long-standing gout the kidneys need not be granular, nor is gout more than an accidental—i.e., not a necessary—accompaniment of granular kidney. Both gout and lead are frequently given as causes of granular kidney. They are not infrequently associated with it, yet the true relation is probably the contrary to that suggested, the patients being especially liable to these affections, because their kidneys are granular and elimination defective, so that they are not causes of granular kidney, but its consequences. The characteristic symptoms of granular kidney are: (1) The arterial thickening; (2) the increased arterial tension; (3) the character of the urine; (4) the hypertrophy of the heart, and (5) the retinal changes. The arterial thickening in the early stage of granular kidney is largely muscular, as can be shown by the effect of nitrite of amyl which relaxes the muscular tissue, but has no action on fibrous tissue. The arterial tension in granular kidney varies. It ought to be above normal. With a low tension the patient is not so well. Tee amount of albumin in the urine is small, sometimes merely a trace. The most important fact about it is that it may be absent at some time of the day or even be absent altogether for days or weeks. As a rule, however, it is persistent, and does not vary much in amount from day to day or at different times of the day. As long as albuminuria occurs as the only symptom in the young it is probably of no significance, but if it be associated with other signs, and especially with arterial thickening, even in slight degree, more caution must be taken in pronouncing it to be of no gravity. For it may be the early state of granular kidney, for this is a disease which commences in early life and is not really rare in the quite young. Even when albuminuria is the single sign, its gravity increases with every year of age after 25, because of the increasing probability of its being due to granular kidney. In the treatment of granular kidney in its early stages there are two things to be avoided: first, a drastic dietetic treatment which will injure the general health, and second, the risk of converting the patient into a renal hypochondriac. When symptoms arise they must be treated on general principles. For sleeplessness

and nervous restlessness at night no sedative is better than cannabis indica. If uremia is imminent it may be staved off by free purgation, active diaphoresis, and oxygen inhalation. Pilocarpine is a great standby in granular kidney. On the basis of an experience extended over a number of years the author advocates the use of renal extract, freshly prepared from the kidney of the pig. This substance must be patiently and continuously administered for a long time in order that favorable results may be obtained.

Pellagra-Like Skin Lesions in Australia. Hogg (Australasian Medical Gazette) puts forward the proposition that in true pellagra, and also in four cases of pellagra-like lesions described by him, the skin in certain situations became more sensitized so that they reacted unduly and in a particular way to sunlight, even when diffused. Three of the cases occurred in the Kenmore Hospital for the Insane, New South Wales, but gastrointestinal symptoms were not present in any of them, and in only one case were the gums spongy. The condition of the tongue was not specially noted. Muscular weakness and loss of weight was noticed in all. Dermatitis was seen upon the backs of the hands and wrists extending up to the forearms in a patchy manner. In one case the epidermis of the fingers and dorsum of hands had exfoliated. Dusty erythema and purpura characterized the lesions, which are described by the author as "pseudo-pellagrous." The mental symptoms were those of dementia, imbecility and neurasthenia, respectively. The appearance of the skin lesions, which were symmetrical and suggestive of severe sun-burn, had the distribution of those of true pellagra, but they suggested to the author that they were indicative of some failure of trophic nerve power, and that they were a terminal condition. In a fourth case occurring at Rydolwere Hospital for the Insane, Sydney, the cutaneous lesions were similar and there was a typical collar-like eruption around the neck. There was general xeroderma and the skin had lost its elasticity over the backs of the hands and the fronts of the legs. This patient died of acute toxemia grafted on chronic brain disease. At the autopsy degenerative changes were found in the central nervous system. The skin showed microscopically great inequalities in the thickness of the malpighian layer, and the prickle-cells contained a gold pigment confined to themselves. All the blood vessels of the skin were congested.

Glycogen Content of Mucous Membrane of Fallopian Tube.—McAllister (Jour. Obst. and Gyn. Brit. Emp.) aimed to discover whether the mucous membrane of the tube ever contained glycogen, and whether, in the case of a positive finding regarding the presence of glycogen, the glycogen content was subject to a cyclic variation in relation to menstruation, as is the case with the endometrium. The first question he answers definitely in the affirmative, as in seven of the tubes examined glycogen was present in considerable amount in the cells of the mucous membrane. Pregnancy is not essential to the presence of the glycogen. Undoubtedly the glycogen content of the mucous membrane of the tube undergoes considerable variations, and at a time when the endometrium presents all the signs of secretory activity and the epithelial cells of its glands are loaded with glycogen, the mucous membrane of the tube can be glycogen-free, and, vice versa, when the endometrium is free from the glycogen, the tubal mucous membrane may contain it in considerable amount. The extremely small glycogen content of the tubal decidual cells in the writer's preparations is interesting as contrasting with the usually large content of intrauterine decidual cells. Inflammation seemed to exercise no effect in increasing the amount of glycogen present in the tubal epithelial cells. Only once was glycogen found in the cells of the corpus luteum and even then the amount was very small.

The Umbilical Lung. — Bonnaire and Durante (Presse med) call attention to the frequency of lung lesions in connection with infection of the umbilicus, even when this trouble is entirely latent. In such cases the prognosis is very bad by reason of the various visceral lesions that are present, which cause death, or of which traces are left behind in later life. The manifestations of infection at the umbilicus are proteau; they vary from an acute febrile condition to a very mild attack with few symptoms. If infection comes by the lymphatics it is slow, and reactions of defense take place; still the toxins act on the viscera. When the infection enters by the blood-vessels it is much more rapid. There may be superficial localization of the infection, deep localization, primary septicemia, secondary septicemia, and latent or chronic forms. In the liver there may be acute infectious hepatitis, an acute degeneration, chronic fatty degeneration, or a sclerosis, which explains some secondary cirroses. In the lung toxic lesions are shown by congestion, culture made from the fluids remaining sterile; by milliary infarcts, milliary infarcts combined with zones of congestion, hemorrhages, and nodular hepatization. In these cases the

bronchioles are intact. the microbic colonies being in the lumen of the small vessels, and none in the alveoli, which is the opposite of the condition found in bronchitis. The prognosis in severe cases is very bad. The worst cases of this infection are seen in the premature infant. The symptoms are slight in many cases, but physical examination will reveal the signs of consolidation where it exists.

Hyperthermic Treatment of Gonorrhoea.—Harrison and Houghton,(Jour, of the Royal Army Med. Corps,)state that the gonococcus cannot resist a temperature of 104 F. for six hours, while the urethra can stand a temperature of 114-119 or even 122. They call attention to a fact often observed by clinicians but little known in literature, that gonorrhœa frequently subsides spontaneously during high fever or other cause, as typhoid. They apply heat to the urethra by a double catheter, the outer closed except for an outlet near the external end, the inner tube carrying a current of hot water. Treatments occupy half an hour. They report sixteen cases, successfully treated in 4-11 days,without complications.

Prognosis and Treatment of Tetanus.—Therapie der Gegenwart concludes, from the experience of various authors, that the prognosis of tetanus is favorable in those cases in which the incubation is more than fourteen days, but that the patient will succumb to the disease if the tetanic symptoms occur after an incubation of only seven days

In the former contingency recovery may be expected even if no anti-tetanic serum is administered, and in the latter it is probably impossible, in spite of the administration of the serum.

He assumes that in cases in which the tetanic symptoms occur promptly a fatal amount of toxin is bound so firmly to the nerve-cells that the anti-toxin which is introduced with the serum is no longer capable of neutralizing it.

From the experience of many authors in the treatment of tetanus with serum he concludes that a combined serum treatment is probably most advantageous in tetanus. As soon as the first symptom of the diseases appear, an intralumbar injection of antitoxin should be administered, and at the same time "curative" serum, or normal serum should be injected intramuscularly around the wound or wherever possible into the nerve. The latter injections should be repeated on the following days.

Hyoscine-morphine and Pituitrin in Parturition.—Knight (South African Medical Record)states he has used hyoscine and morphia in 147 cases during the past three years.

An but 13 of these were abnormal labours ill which he was called in after the patient han been in labour for two or three days. He gives an initial dose of hyoscine 1-100 gr. and morphia 1-6 gr. He repeats the hyoscine but not the morphia. It is best given two hours before the expected birth of the child. He gives an intramuscular injection of tyramine, pituitrin or ernutin after delivery as the uterus is apt to be inert. He describes no ill effects and regards the treatment as lessening the dread of parturition.

Transplantation of the Ovary in the Human Being with a Record of three Cases.—Davidson (Edin. Med. Journal) points out that the various phenomena, such as headaches, flushings, and other nervous symptoms, characteristic of an early menopause, induced by removal of both ovaries for pathological conditions, can be treated only with much difficulty. Therefore if ovarian transplantation is successful it should be the ideal treatment. The author gives three cases, two of which were successful. After removal the ovaries were immersed in normal saline solution at blood heat. After closing the peritoneum he imbedded slices of the more healthy portions of the ovary in a slit in the rectus muscle. The slit in the rectus was sutured over with catgut. About the time of the next menstrual period there was stiffness in the rectus over the site of implantation. Boud, in a series of cases, found that after removal of one ovary, the other did not hypertrophy unless stimulated by pregnancy or sexual intercourse. On this line of reasoning an ovarian transplantation should be more successful in a married woman. The implantation should be near the pelvic bloodvessels to receive the benefit of the pelvic congestion.

Case of Ovarian Pregnancy with Full Time Fetus.—Grimsdale (Jour. Obst. and Gynec. Brit. Emb.) reports the case of a woman aged 23, who entered the Royal Infirmary, complaining that she had never become small again after the birth of her first child, three years previously. Examination revealed the uterus lying on the right side, while a large mass, freely movable, occupied the lower abdomen, reaching up to umbilicus. No tenderness of tumor and no free fluid. The diagnosis of solid ovarian tumor was made. The tumor was delivered whole through s mesial incision. It occupied the position of the left ovary the corresponding tube, mesosalpinx, and round ligament being normal. On opening the tumor it was found to contain a fetus and a placenta. X-ray of the fetus showed its bones as developed to term. The tumour wall enclosing the fetus was much thinned

out, so that sections from it failed to show ovarian tissue. He regards the case as one of ovarian pregnancy, and speculates upon the possibility of coincident ovarian and uterine pregnancy.

Features of Renal Tuberculosis.—Evans, in the London Medical Lancet, says that unilateral renal tuberculosis, insidious in its onset, is progressive in its course, affecting in due time the ureter and the bladder, whereupon the most striking and constant symptoms of the malady become evident. The second kidney after a varying interval may become affected, and finally the whole system may be invaded, so that the patient dies from a "renal phthisis," analogous to a "pulmonary phthisis." It becomes, therefore, right and proper to employ operative measures as soon as the diagnosis of unilateral tuberculosis can be arrived at. This rests upon the indisputable evidence of bacilliferous pyuria, however slight, of tuberculous origin, as evidenced by the microscope or by the antigen; further, this must be unilateral as found in the urine collected by ureteric catheterisation, and gives a precise and early diagnosis demanding early nephrectomy.

The most indicative symptom experienced by the patient is "cystalgia," usually a scalding set up by toxic and pathogenic irritants which produce an edema, congestion, or a minute ulcerative papilitis on the mucous membrane surface at one ureteric orifiice, extending to the trigone and the urethral orifice, with considerable discomfort in severe pain, frequent micturition, and urethral smarting.

In the progress of tuberculosis of the kidney there are periods of exacerbation alternating with periods of remission of variable duration, when all clinical symptoms are wanting and the general improvement is shown by an increase in the body weight. Do not, however, be misled; these are clinical phases full of treachery to the surgeon of limited experience in this particular subject, as has been demonstrated in patients, though apparently healthy, developing uremic symptom.

The establishment of the tubercle bacillus in the mucous membrane of the bladder is favored by an antecedent affection of the urinary tract. It is known that urine contaminated by the tubercle bacillus may for years flow over the mucous membrane of the bladder without any trace of an intravesical focus. Inasmuch as the ravages of the unaided tubercle bacilus are slow and inextensive, the elimination of any associated septic condition must be considered the first step in the surgery of renal tuberculosis.

Drug Treatment of Enuresis.—Simpson (Edinburgh Med. Jour.) says that belladonna, citrate of potash and urotropin are three drugs of undoubted efficacy, but a careful examination of the urine is to be made bebefore either is to be employed. In cases where the urine is normal, or at least presents no abnormal features, and the incontinence is the result of some debilitating condition, tonics should be first administered, and then belladonna, commencing with ten minims of the tincture two or three times a day, and gradually increasing to 20 to 25 minims. In most cases 15 minims will be found the maximum dose necessary to be employed. In cases where the urine is extremely acid, the acidity may be reduced by ten grains of citrate of potash thrice daily and when the acidity has been overcome, the belladonna may be begun. If the general health is not good, two to three minims of liquor strychnine may be added. Where the urine is alkaline, dieting is of first importance, all carbohydrates being prohibited. If it is very alkaline, acid sodium phosphate may be given, and then, when the alkalinity has been reduced, belladonna as above. Where it is established, bacilli are in the urine; if this is very acid, reduce with acetate of potash, and administer urotropin, 5 to 10 grain doses thrice daily. In mixed infection, vaccines may be used to advantage. Ergot should be tried if belladonna fails. If the child is backward mentally, thyroid extract may be tried, 5 grains daily. If the child is highly nervous, and has disturbed sleep, 5 to 10 grains of potassium bromide may be added to the evening dose of belladonna.

Small Enemata.—Guerin in the London Practitioner points out that small enemata, one, two, or three, teaspoonfuls in volume, are extremely convenient as a method for giving drugs and very useful in all cases in which these cannot he taken by the mouth; they may often be used instead of hypodermic injections. Enemata of this size have been recommended by several physicians, particularly by Montennis, for giving a first dose of morphia. A small enema syringe, holding ℥ss, or a urethral syringe, with a short length of rubber tube attached, holding 10 minims, may be used, according to the strength of the solution used. Laudanum should be given in this way and not mixed with a nutrient enema or one of saline. The mixing is often difficult and the desired ffect is lost by too great dilution. A much more certain result is secured when a small enema of laudanum is given before the more important injection. A rectum which will not tolerate a large quantity of fluid, will retain it quite well after this precaution.

Bromide of potash, alone or with a few drops of laudanum, has given excellent results in patients unable to tolerate it by the mouth. It may be used alone for infantile convulsions, ten grains in one tablespoonful of water and the dose can be repeated after an interval. Belladonna is very useful in small enemata, particularly in cases of painful enteritis with constipation and tenesmus, It may also be given to narcotize the posterior urethra and the neck of the bladder in cystitis, and in the painful stage of gonorrhea. For this purpese, it may be combined with morphia or extract of opium. Cocaine may be added with advantage, especially in congestion of the prostate. The pain of catheterizing, or of any application to the posterior urethra may be lessened by giving a small enema about a quarter of an hour previously. Antipyrine is much praised by Montenuis, when given in small enemata to children in convulsions, and for vomiting due to gastric troubles. In the furious fits of temper sometimes shown by children a small enema of antipyrine has an immediate calming eeect. A dose of from 4 to 8 grains, according to age, is given in tablespoonful of water. Guyon and Ginard state that antipyrine soothes the bladder in pelvic neuralgias and dysmenorrhea. A little laudanum or cocaine may be added. The iodides, creosote and arsenical preparations may be given in this way, but not mercurials or quinine; these last irritate the bowel. Monteuuis insists on the use of a small syringe with a short length of tubing drawn on to the nozzle, The length shoulh be rather under 4 inches. Lucas-Championniere has shown that a longer tube only rolls up on itself in the rectum. Burburea considers that it is the last part of the rectum which absorbs the best.

Infantile Type of Uterus with Dysmenorrhea.—Watkins (Surg., Gyn. and Obst.) says that dysmenorrhea is most often due to imperfect development of the uterus. The pain is chiefly caused by contractions of the uterus, which soften and dilate the cervix and are much like the pains of the first stage of labor. Prophylaxis is the most important part of the treatment. The general health of the girl should be carefully looked after during puberty. Dysmenorrhea is often due in part or entirely to the general condition of the patient. In cases of infantile uterus causing dysmenorrhea the logical treatment consists in the use of remedies to promote development. The use of the intrauterine stem is useful in such cases. The patient should be kept under supervision for months after the use of the stem pessary. The cervix should be dilated when possible before each period for some months. The stem pessary should be reinserted after one or two months if necessary. This treatment is indicated only in the severe type of cases. It is, however, a poor substitute for marriage and pregnancy. In cases of excessive menstruation with clots and severe pain relief may be obtained from the use of suprarenal gland, which has lately been recommended. Suprarenal gland diminishes the action of the ovarian secretion. One 3 grain tablet of the desiccated gland is given three or four times daily, for three days just before or during the early part of the menstrual period.

The Treatment of Pleurisy in Children.—Concetti (Dublin Journal of Medical Science) remarks that "dry pleurisy we treat either by warm, moist packs or by painting with iodin. When fluid is present, thin, serous, slightly corpuscular, we aspirate, and we seldom find it to fail in causing the permanent disappearance of effusion. When the pleurisy is purulent, the one indication is to remove the fluid, and the question naturally arises, Is the treatment in cases of infancy different from that of adult life? In infancy it is less difficult to attain a cure by aspiration, or repeated aspiration, without recourse to pleurotomy. If the character of the fluid is seropurulent, not too thick, and of recent formation, it is not unusual to effect a cure with one or two aspirations. Still, if the fluid is thick and scanty, you yet may effect a cure by repeated aspirations. In the presence of large collections, one or two aspirations prior to operation lessen the risk of pleurotomy. In cases of large collections in the left side, with marked displacement of the heart to the right, a rapid withdrawal of the fluid may cause shock and arrest the heart by syncope. After aspiration the fluid, if reproduced, is always less in quantity than before, and there is a tendency in the cavity to contract, and the heart becomes habituated to return to its normal position. For which reasons aspiration should precede pleurotomy."

The Tuberculous Soil in Gonorrheal Arthritis.

Tomassi refers to the teaching of Pellizzari that gonorrheal arthritis refers only in individuals predisposed to, or suffering from tuberculosis. He cites his own clinical experience in support of this view. In fact gonorrheal arthritis may serve as the first indication of the tuberculous habitus, and demands a dual treatment, that of the local joint condition and that of the constitutional disease caused by the bacillus of Koch. —La Riforma Medica.

Quincke's Disease.—Quincke (Monats. fur Prak. Derm.) mentions it as a syndrome characterized by the appearance of circumscribed edemas of fugacious and recidivist tendencies. Sometimes hereditary or familial, it is met with usually in the first half of life, and generally in those subject to nervous and dyspeptic ailments. Probably it is a manifestation of anaphylactic sensibilization to various toxic though commonplace influences, resulting not only in passive exudation, but in active secretion of the vascular endothelium. Treatment is sufficiently unsatisfactory, but the nervous and alimentary factors must be counteracted as far as is possible; and belladonna, with sometimes digitalis, may be used to induce vasoconstriction at the times of stress. The edematous swellings are very apt to attack the face, but the various mucous membranes are often involved, and the larynx may be so violently affected that tracheotomy is required.

Treatment of Hematogenous Infections of the Urinary Tract.—Thorkild Rovsing (Revue clinique d'urologie) says that while nephrectomy is indicated in unilateral hematogenous renal tuberculosis, he considers operative intervention unnecessary in all other forms of hematogenous nephritis, except in rare instances. He never operates in colon bacillus infections of the kidney, unless they are complicated by calculous pyelonephritis, or pyelonephritis with hydronephrosis. The doctor's routine treatment in simple colon bacillus infections is to give four 15 grain cachets of phenyl salicylate daily, have the patient drink three to four quarts of distilled water a day, and establish permanent bladder drainage with a retention catheter, to prevent all accumulation of urine in the bladder—with the opportunity consequently given for bacterial pullulation. These measures eradicate the bacilli completely in 50 per cent. of the cases, and would probably do so in more if the patients could be induced to remain in bed a longer time. The cases in which they fail are those with a tendency to chronicity of the nephritis and those in which there is a cause of constant reinfection of the kidney, e.g., cholecystitis, appendicitis, etc.

The retention catheter used should have been sterilized in a formaldehyde solution, as this hardens it and permits of its being left in for three or four weeks without removal. As soon as the bacilli disappear from the urine the catheter should be removed, about one and two-thirds ounce of a one per cent. solution of silver nitrate being left in the bladder to destroy any organisms hidden in the mucous folds.

In the cases in which the above mentioned measures fail Rovsing strongly recommends the use of an autogenous vaccine. From a culture of the organisms in the patient's urine he has prepared two emulsions containing, respectively, 100 and 500 million dead bacilli to the c.c. In adults he gives at two or three day intervals, first, a subcutaneous injection of 25 millions, next a second of 50 millions, then three or four of 100 millions, and finally 500 millions to the end of the treatment. In a few grave cases the dose was carried up to one billion. In children the initial dose is 10 millions, which the author only very cautiously increases later. Opsonic control is quite superfluous if the early doses are made small. In twenty grave cases, with repeated febrile exacerbations, chills, and serious general condition, the vaccine treatment brought about a cure after all other measures had proved valueless. Most of these cases were of colon bacillus infection of unknown origin, while in a few there was a sudden bilateral acute nephritis, with high degrees of albuminuria and pyuria, and in still others there had been recurring attacks of renal infection for years. Statistical comparison by Wulff of the effects of the phenyl salicylate, distilled water, and catheter treatment with those of vaccines, administered separately, showed that the vaccines are less efficient than the internal rreatment in diminishing the bacilluria, but more efficient in overcoming the pyuria and albuminuria.

Fatal Hemorrhage from the Throat.—Rolleston (British Journal of Children's Diseases) mentions the case of a child who was suffering from ulceration of throat and uvula; no diphtheria bacilli or Vincent's organisms were found. She had suffered five weeks earlier from measles. A few days after admission to hospital she gave a cough; a huge gush of blood poured out of her mouth and the girl died in five minutes. At the postmortem abscess cavities were found in both tonsils, with ulceration of the uvula, soft palate and neighboring tissues. The exact site of the bleeding vessel could not be ascertained. This case shouid be regarded as an instance of ulcerative sore throat, to which the name pseudodiphtheria has been applied. The hemorrhage probably came from the laryngeal portion of the pharynx.

"Elixir Saloform Comp., Flexner." Contains 20% Alcohol. An efficient remedy for Rheumatism, Gout, Cystitis and Uric Acid Solvent. Prepared for physicians' prescriptions only. Robinson-Pettet Co., incorporated. (See page xiv this issue.)

Fracture of the Femoral Neck in Children.—Schwarz (Beitr. z. klin. Chir.) has become convinced from a study of radiographs that when occurring in childhood this variety of fracture gives as large a proportion of faulty union as in middle life or old age, although function is far more rapidly restored. As regards the end results four types are distinguished: 1. Ideal union with completely normal clinical and Roentgenologic findings, this being comparatively rare. 2. Marked position of coxa vera, as seen in the majority of cases. 3. Pronounced deformity of the entire upper end of the femur. 4. Union with progressive disappearance of the femoral neck, eventually combined with complete separation of the epiphysis. From his investigations Schwarz concludes that fracture of the femoral neck in childhood is much less common than epiphyseal separation, which presents similar symptoms. The fracture is intertrochanteric and gives a typical clinical picture and x-ray findings.

Syphilis of the Heart.—Orkin (Berlin klin. Woch.) points out that syphilis plays an important part in the ætiology of myocarditis. Often one finds no cause for the sickness, and a history of syphilis is not obtained, but the Wassermann reaction may prove positive, and x-rays will show a heart enlarged in every direction, and with a dilated aorta. In young individuals in whom cardiac symptoms suddenly appear without apparent cause, one should especially think of syphilis. In almost all young parients relief of symptoms rapidly follows on appropriate treatment either by mercurial inunction or by potassium iodide. In older patients cure is much more difficult of attainment. It has not yet been determined whether salvarsan can safely be used.

Ante-Mortem Thrombosis in Pneumonia.—Fleming (Edin. Med. Journ.) discusses the nature of the clots so often found in the right heart in death from lobar pneumonia, and expresses the opinion that such clots are frequently formed hours, or even doys, before death. Excess of CO_2 in the blood, and the formation of abundant thrombokinase owing to disintegration of large numbers of leucocytes are probably important factors in bringing about this ante-mortem thrombosis. Clinically he believes that thrombosis may be feared in any case in which engorgement of the jugular veins is present along with diminution in loudness of the pulmonary second sound. In order to combat the tendency to thrombosis in pneumonia he advocates the early administration of cardiac tonics, with the addition of diffusible stimulants if the heart shows any signs of difficult action. He thinks that the administration of oxygen may be useful also by counteracting the excess of carbon dioxide in the blood, and also suggests the use of drachm doses of citric acid every four hours. Bleeding he thinks should never be performed unless in robust patients, as it may only aid a thrombosis which has already begun.

Magnesium Treatment of Spasmophile Convulsions.—Berend (Monatschr. f. Kinderheil.) mentions the various theories which have been brought forward as to the cause of spasmophilia. The oldest, of Hassowitz, was that tetanus is a nervous symptom complex of rickets. Stoelzner believed it to be due to a disturbance of calcium content of the tissues. Quest thought that a change in the calcium content of the brain caused increased irritability of the brain, even sufficient to cause convulsions. Another theory was that convulsions were due to disturbances of the functions of the ductless glands. The Dr. has found no pathological changes regularly present in the glands in children who died of tetanus. The writer has found that defective calcium and magnesium content of the tissues increases irritability and convulsions ensue. The use of calcium by hypodermic injection in convulsions has been tried, but has caused severe infiltration of the tissues. Magnesium has not this effect, while it does cause a lessening of irritability. It was believed that it was too poisonous a substance to be used in this way in young infants. But the author finds that with an initial dose of 0.20 per kilogram of weight in dogs no poisonous effects are caused. In infants twice this dose may be given without bad effects. Up to the present time that author has treated by this method forty cases, twenty-five of spasmophile convulsions, and fifteen of ordinary convulsions. He considers the effect of the treatment, first on the electrical irritability. The writer found this irritability decreased immediately after the injection was given, but this effect lasted only a few hours. Control cases among normal children also showed this lessened irritability. In no case was irritability increased after magnesium.

The effect on the spasm of the glottis was shown in eight cases, a lessening in number and severity of the spasms being seen. In several cases after two or three injections the cyanosis was less and of shorter duration. None of the cases treated died of spasm of the glottis. Fifteen cases of uncomplicated tetanic convulsions all were benefitted by the magnesium injections. In two to three hours after the injections the convulsions ceased in many cases. In no case did they last more than four days after

the injections. In latent tetanus, the Trousseau symptoms, the effect was not so rapid. Of the twenty-five spasmophile convulsive cases, ten came in a status epilepticus. In two-thirds of the cases one or two injections caused the spasms to subside;and of thirteen cases a recurrence of spasms was observed in only three, and they were very brief. In convulsions due to such causes as infectious fevers, meningitis, and uremia, magnesium does no good and is not indicated. To sum up the author's results: magnesium influences most quickly the electrical irritability of the muscles and the convulsions involving the limbs,less quickly eclampsia, and the Trousseau symptom, least of all the laryngeal spasm. At the same time it does more good than any other treatment that he has used for this symptom. The duration of the tetanus is greatly reduced. Mother's milk is the best possible diet in these cases. Artificial feeding is much more successful with the aid of magnesium injections than when used alone. After the emptying of the intestines with castor oil and magnesium injections, in twelve hours feeding with gruels is begun. The two dangers to the child are inanition and return of convulsions when milk feeding is begun. The use of gruels prevents death from inanition. Casein, milk, or small quantities of malt soups are useful. Later rice, water, cocoa, meat soups, and fruit juices are given.

Fatal Cases of Eczema in Children.—Hitchens (Brit. Jour. Child. Dis.) has treated twenty eight cases of eczema, of which six ended fatally. The first and the fifth cases were in the hospital such a short time that not much can be said about them, and of the fourth case it might be said that the diarrhea and vomiting, which came on just before and apparently caused the fatal issue, were intercurrent affections and quite enough in themselves to carry off a weakly child. In the second case the recovery from the eczema was rather unusually rapid, and all seemed to be going on to a completely successful issue, when without any warning all the phenomena of shock with collapse developed and the patient died in the course of a few hours. In the third case the recovery from the eczema was much more gradual, but on recovery the same symptoms supervened, though the fatal issue was not quite so rapid and was accompanied with symptoms of cerebral irritation. In these cases the writer does not think the treatment can have caused sufficient absorption of metallic poisons to cause death. He also questions the occurrence of status lymphaticus. He now warns mothers that their children may possibly be better with eczema than without it, and that its cure is not always an unmixed blessing.

Hereditary Congenital Torticollis.—Greig (British Journal of Children's Diseases) reports four cases of congenital torticollis in one family, including the maternal grandmother, mother, and two of her four children. The left side of the neck was affected in each instance, and the deformities were all noticed shortly after birth. The second and fourth of her children, a girl and a boy, respectively, are afflicted, while the first and the third, also a girl and a boy, escaped. All the members of the family are well and strong, including the father, who is free from the complaint, and present no other deformities than those mentioned and the secondary changes incident to them.

Summer Diarrhea of Children.—Forsyth (Australian Medical Journal) found five main types of bacilli: (1) The Shiga-Flexner type, in 25 per cent. of the total number, but in the last two years with more skilled work found in 33 per cent.; (2) the Gaertner type, in 24 per cent.; (3) the slow fermenter, pure or mixed with other classes, in 26 per cent.; (4) the Morgan, in 7 per cent., but absent altogether for one season; (5) various liquefiers of gelatine. These five classes occurred in 80 per cent. of the cases examined. The symptom complex caused by some of these organisms is so characteristic that one can often diagnose the type of infection by the appearance and symptoms and fairly constant pathological changes are found in these cases. In the Shiga-Flexner type the onset is very acute, with diarrhea severely marked, and often blood-stained motions; the temperature is certainly raised for a week, and perhaps for fourteen days. In three or four weeks the extreme symptoms have vanished and the child is merely a "difficult feeding" case. The urgent symptoms subside or the baby dies. The mortality is 66 per cent. In this type the intestine is thickened, the large bowel and the last foot or so of the small bowel are affected. The lymphoid structures are picked out, and often the lymphoid patches are ulcerated, and the mucous membrane eroded and covered with a sticky debris. The spleen and glands are swollen. In the Gaertner infections a very few are extremely acute, and these die in a day or two with great toxemia and profuse watery stools. These are probably not pure Gaertner infections. The majority of the Gaertner infections are chronic troubles. By the time they are diagnosed and admitted the baby is fairly exhausted and wasted. The duration of the trouble is seven or eight weeks; much longer than the Shiga infec-

tion. Postmortem almost the whole of the intestine is affected. The bowel is almost transparent, the lymphoid structures are not particularly picked out, the spleen and glands are not enlarged. In the slow fermenter cases the child is extremely ill and differs little, if at all, from the Gaertner type clinically, but the bacillus isolated ferments lactose in seven, ten or even fourteen days. It has a great deal of virulence, and is probably capable of producing a gastro-enteritis, but its favorite role is that of "jackal," after the trouble has been started by other germs.

Spasmodic Heredo-Syphilitic Paraplegia in Children.—Marfan (Arch. de med. des enf.) says that there are two groups of spasmodic paraplegias; the first, of congenital origin is described under the head of Little's disease; the second includes those that appear long after birth. Of the latter two forms are generally described, that resulting from the pressure of Pott's disease, and the spasmodic family paralysis of Strumpell. The doctor describes a third type under the name of heredo syphilitic paraplegia of children. This paralysis always begins later than the fourth year; it comes on insidiously, beginning with a slight limp, and increasing in degree slowly. After a year or more the child becomes unable to attend school. The walk is difficult, stiff, the point of the foot dragging, and the child balancing from side to side. Flexion of thighs, knees and ankles is very incomplete; it is this incomplete flexion that causes the greatest difficulty in walking. There is a certain degree of equinus of the feet accompanied by a small amount of varus. The thighs approach each other, and the knees touch. When the patient is in repose this spasmodic rigidity is not shown. The legs are somewhat rotated and adducted; the reflexes are much exaggerated; the muscles are hard, and the tendon of Achilles is tense and contracted. The arms are normal. Sensibility is not altered; there is no pain; the vesical and anal sphincters functionate normally. There are no trophic disturbances, no muscular atrophy, no changes in the skin. There are ocular troubles, Argyll-Robertson pupils, and loss of visual acuity. The intellect is somewhat retarded. Bodily development is normal. The Wassermann reaction is always positive. There is no tendency to spontaneous cure, but progress is continuous though slow. This is a special clinical and anatomical type. There are diffuse lesions of meningomyelitis in all syphilitic diseases of the nervous system in adults or children. No autopsy has been made as yet in these cases, but clinical data would cause us to believe that the alterations are of the nature of a combined sclerosis of the spinal cord.

Treatment of Bedsores.—Mosny and Pruvost (Bulletins et memoires de la societe medicale des hopitaux de Paris) mention a case of a young man suffering from bronchopneumonia, and phlebitis of both lower extremities in whom, after partial recovery from these disturbances, a large suppurating bedsore developed and the temperature, previously normal, rose a second time. The sore continued to enlarge, in spite of the usual measures of treatment, until it attained the size of a silver dollar, when applications of hot air—as hot as the patient could stand—were begun. Even at the first sitting, of fifteen minutes' duration, the necrotic base of the ulcer began to redden, and soon after showed a tendency to granulate. The temperature, previously rising, remained stationary for two days, then began to descend, and by the thirteenth day was normal. Seven hot air applications in all were made, at intervals of two to four days, and on the twentieth day the ulcer was healed. That the hot air treatment was alone responsible was shown in that, during the intervals between applications, the sore had been merely covered with dry dressings.

Achard, discussing the case just referred to, stated that he had obtained good results with hot air in the treatment of gangrenous ulcers, e.g., in a case of diabetes, as well as in one of Pott's disease with paraplegia. While in the latter case, owing to the trophic nature of the ulcer, the hot air failed to induce healing, it exerted a rapid detergent effect upon the lesion, arresting suppuration and fetor.

Treatment of Night Terrors.—Comby (Bulletin medical) says that night terrors in children are, in more than one half of all cases, of toxic origin. Autointoxication from the gastrointestinal tract should especially be thought of, gastric motor atony and constipation being frequently associated conditions. Alternating diarrhea and constipation due to enteritis are also often met with, and in the treatment it is of great importance to correct any existing dietetic errors, e.g., excess of food, coarse and indigestible food, rapid eating, unduly large fluid intake or the use of excitants such as alcohol and coffee. At the evening meal, milk, water or some simple, bland infusion should alone be permitted.

Reflex causes, such as ascarides or pinworms, adenoid growths, hypertrophied tonsils, hernia—especially umbilical—and occasionally phimosis or testicular ectopy, should likewise be sought, and corrected if

found. Simon laid stress on three possible causes of night terrors: 1, Congenital syphilis, yielding to antiluetic remedies; 2, attenuated forms of malaria, in which case arsenic and quinine are to be used; 3, inherited gouty tendency, in the presence of which, a lactovegetarian diet and at times small doses of colchicum give excellent results.

Nervousness predisposing to night terrors can best be dealt with by administering tepid baths before bedtime, at least two hours after supper. Exciting stories or fatiguing occupations in the evening are to be prohibited. Pillows containing horsehair are to be preferred to those stuffed with feathers. Placing powdered camphor under the bolster appears at times to be useful.

During the actual periods of terror, fresh air, cold affusions, verbal encouragement, and the inhalation of ammonium carbonate or a few drops of ether or ethyl bromide suffice as palliatives. To diminish the frequency and intensity of the attacks, bromides may be used, while in the event of persistent insomnia, small amounts of sulphonmethane, sulphonethylmethane or ethyl carbamate—the latter in doses of four to eight grains (0.25 to 0.5 gm.)—can be ordered in a little lukewarm milk or water sweetened with sugar,

Operative Treatment of Fractures.—Groves, in The London Medical Lancet, records his experiments on the operative treatment of fractures in animals, and seeks to apply the results to human practice. In plate fixation the great difficulty lies in the fact that this method, if unaided, never secures complete immobility of the fragments. This is due to loosening of the screws as a result of the softening of the bone from their pressure, except possibly when metal thread screws are passed entirely through the bone on both sides; bending of the plate; and the fact that the plate has its purchase on but a small proportion of the entire circumference of the bone. The results of this insecurity are bad because the operation necessitates removal of some of the natural support through incision of the periosteum and muscular sheath; because there is some interference with the vascular supply of the ends of the fragments; because there is a loose foreign body left in the wound; and because of the external wound, through which infection may take place. The use of added external fixation for weeks greatly interferes with the employment of the best means to hasten bony union. Pegs are not satisfactory because of both incomplete fixation and likelihood of breaking. Complete and efficient fixation may be accomplished in two ways: 1. By the use of sufficiently strong plates fixed to the bone by cotter pins or bolts which pass through the entire shaft to be held by bending down in the former case, or a nut in the latter; 2, by transfixing the bone well above and below the site of fracture by two strong pins, which are then united laterally at some distance from the shaft by two strong metal bars. The former method has the disadvantage of exposing the site of fracture to infection. The latter avoids this, for the fracture site is not directly exposed, and the bars lie in the muscles distant from the bone. By either method fixation is so perfect that no external methods are called for, and the free use of massage is possible. Union occurs with a minimum of callus, and the union is firm, showing that absolute fixation does not hinder vital repair. Even when every precaution is taken to secure asepsis in the operation of plating, the irritation of the plate and the screws and the presence of a foreign body leads to an inflammatory reaction with the exudation of serum, which makes its way to the surface through the wound and opens a channel for secondary infection. Delayed union is a possible result of mechanical fixation, due to interference with the blood supply of the ends of the bones, but this is of relatively little importance if the fixation is such as to remain efficient for an indefinite time. The method of indirect fixation by means of the pins and connecting bars overcomes the disadvantages of the direct methods, and in the case of comminuted fractures is specially valuable because it does not disturb the periosteum and union occurs kindly in every case. It is the ideal method. In addition to these experiments, Grove shows that, save on account of the added blood supply furnished by the periosteum, this structure is of very slight importance in the regeneration of bone. He has been able to prove that the osteoblasts arise from the bone itself, and not, as commonly stated, from the periosteum. In certain cases of very oblique fractures of the long bones, and in fractures of the patella and olecranon, wire offers the best means of obtaining fixation. Here he points out that iron wire is the only suitable material and that it should be drawn tight by means of special forceps before it is twisted. The twisting should be by one turn only; the ends are then cut short, and two added twists taken to fix the first. This avoids the danger of cutting the wire by sharp kinking during the process of twisting. The clinical applications of Groves's studies will be given in a continuation of this paper.

The Diagnosis and Treatment of Granular Kidney.—West, in The London Medical Lancet, says that granular kidney is a form of chronic interstitial nephritis, yet all forms of chronic interstitial nephritis, even if bilateral, are not granular kidney. For instance, the gouty kidney, so-called, is a mixture of interstitial fibrosis with cell degeneration, yet gout has nothing essentially to do with granular kidney, for even in long-standing gout the kidneys need not be granular, nor is gout more than an accidental—i.e., not a necessary—accompaniment of granular kidney. Both gout and lead are frequently given as causes of granular kidney. They are not infrequently associated with it, yet the true relation is probably the contrary to that suggested, the patients being especially liable to these affections, because their kidneys are granular and elimination defective, so that they are not causes of granular kidney, but its consequences. The characteristic symptoms of granular kidney are· (1) the arterial thickening; (2) the increased arterial tension; (3) the character of the urine; (4) the hypertrophy of the heart, and (5) the retinal changes. The arterial thickening in the early stage of granular kidney is largely muscular, as can be shown by the effect of nitrite of amyl which relaxes the muscular tissue, but has no action on fibrous tissue. The arterial tension in granular kidney varies. It ought to be above normal. With a low tension the patient is not so well. The amount of albumin in the urine is small, sometimes merely a trace. The most important fact about it is that it may be absent at some time of the day or even be absent altogether for days or weeks. As a rule, however, it is persistent, and does not vary much in amount from day to day of at different times of the day. As long as albuminuria occurs as the only symptom in the young it is probably of no significance, but if it be associated with other signs, and especially with arterial thickening, even in slight degree, more caution must be taken in pronouncing it to be of no gravity. For it may be the early state of granular kidney, for this is a disease which commences in early life and is not really rare in the quite young. Even when albuminuria is the single sign, its gravity increases with every year of age after 25, because of the increasing probability of its being due to granular kidney. In the treatment of granular kidney in its early stages there are two things to be avoided: first, a drastic dietetic treatment which will injure the general health, and second, the risk of converting the patient into a renal hypochondriac. When symptoms arise they must be treated on general principles. For sleeplessness and nervous restlessness at night no sedative is better than cannabis indica. If uremia is imminent it may be staved off by free purgation, active diaphoresis, and oxygen inhalation. Pilocarpine is a great standby in granular kidney. On the basis of an experience extended over a number of years the outhor advocates the use of renal extract, freshly prepared from the kidney of the pig. This substance must be patiently and continuously administered for a long time in order that favorable results may be obtained.

Radical Cure of Procidentia Uteri.—Mamourian, in The British Medical Journal, believes in vaginal plastic methods for the cure of this condition, to the extent of not having performed an abdominal operation for this purpose in the lost two years. He believes that the vaginal route gives the easiest and best access to the structures which constitute the retentive mechanism of the uterus. The integrity of the pelvic floor and the anteverted position of the uterus constitute the two main factors in the maintenance of the uterus in proper position. An operative plan of procedure along normal anatomical lines should be adopted, and comprises: 1. Reduction of the weight of the uterus proper. 2. Removal of excessive cervical substance. 3. Anteflexion of the uterus. 4. Narrowing of the vaginal canal. 5. Lengthening of the posterior vaginal wall. 6. Restoration of the parallelism of the vagina to the conjugate of the pelvis. 7. Restoration of the continuity of the cellular tissue around the new vagina. 8. Repair of the pelvic diaphragm. 9. Repair of the perineal body. 10. Widening of the perineum and lessening the size of the pudendal orifice. These conditions are fulfilled by curettage, cervical amputation, and anterior colporrhaphy. The treatment of the posterior vaginal wall consists in the removal of a strip of vaginal mucous membrane extending from the vaginal orifice to the top of the posterior fornix, the margins of the strip running parallel until within half an inch of their upper limits, where they converge. The breadth of this strip varies with the needs of the case, but it should be such as to produce a slightly greater reduction in size of the vagina than is desired as an ultimate result. The edges of this wound are sutured from above down, and to prevent curling, submucous Lembert sutures are inserted. This makes the suture line stand out and makes an effective ridge in the vaginal wall in place of the posterior vaginal column. Three superposed interrupted sutures transfix the cellular tissue at the bases of the broad ligaments and over the

levator fascia. The second set close the gap in the pelvic fascia and levator ani, and the last lot pass through the triangular ligament, vaginal muscles, perineal body (all more or less blended with cicatricial tissue and not identifiable), and emerge through subcutaneous tissue. In this way all the dead spaces are obliterated and there is a solid fibromuscular wedge interposed between the rectum and the vagina.

Scarlatinal Measles.—Blackett (The British Medical Journal) reports an instance of two children ill in the same bed, the boy having a well-marked scarlatinal rash on the body and the girl exhibiting a typical rash of measles, with blotchy face, injected conjunctiva, and so on. In the course of time the condition of both children improved for a while, and then again became aggravated, the girl this time developing scarlet fever, while the boy came down with measles. He does not recall seeing any other case in which these two diseases have been so closely associated without any sacrifice of their individuality.

The present writer remembers an experience of a similar kind, which proved to be very harrowing. A woman and her three children—six, four, and two years of age, respectively—were sick at the same time. The mother complained of general malaise, fever, headache, and had a well-defined so-called scarlatinal sore throat. Her 2-year-old daughter showed scarlatinal sore throat and developed a characteristic rash of scarlet fever on the chest, while the face and the body from the waist down was covered with a measles eruption. This little girl soon developed meningeal symptoms and died.

The same combination of symptoms was observed in the brother six years old, who died of meningitis after having been ill only twenty-four hours, and in spite of all treatment. Another daughter, four years old, showed, like her brother and sister, a characteristic eruption of scarlatina on the chest and in the throat, and an equally characteristic eruption of measles on the face and on the lower part of the body. Fortunately, in her case, the central nervous system did not become involved, and the writer was able to save her, as also the mother.

In a young man eighteen years old, a period of malaise was followed by intense fever and eruption characteristic of measles. For the next twenty-four hours his condition became rapidly aggravated, and on the second day after the eruption of measles had appeared the blotches on the body were interspersed with a typical scarlatinous eruption, which also showed in the very edematous pharynx. The young man's temperature was 104 degrees for several days; but he eventually recovered.

Petrolatum as a Substitute for Beck's Paste in Treating Fistula.—Salatich (New Orleans Medical and Surgical Journal) mentions the dangers and disadvantages of bismuth paste, which not infrequently has proven highly toxic. The writer uses yellow vaseline, which is easier to handle and can be purchased in flexible tubes, already sterilized. The Dr. proceeds as follows:

Sterilize the amount necessary in an open vessel, set in sterilizer or water bath, then draw into one or more ordinary glass syringes and use partly warm or cool, as we do Beck's paste. In the most foul and freely suppurating cavities, after one injection and without any other treatment, all odor and suppuration diminish. Abdominal wounds, that suppurate either from infection or contaminated catgut, often show very foul pus. After making an incision—only a small one is necessary when vaseline is used—all the pus is pressed out; the cavity is then filled with vaseline, and the wound needs no dressing for two or three days, at the end of which time very little odor and pus remain. The procedure is then repeated, and the dressings can remain for a longer period, only wiping the abdomen with alcohol being necessary. It is marvelous, says Salatich, how rapidly cases heal where the entire wound above the fascial layers suppurate, and with less danger of hernia resulting.

In all acute and subacute sinuses it is best to wait until little serum or sero-pus exudes before injecting the vaseline, especially if there is any fear of dead bone at the bottom, which must be removed, or the patient will be made worse, for the vaseline stops drainage and the pus must find some other means of exit.

New Treatment for Ringworm.—Foley (London Lancet) has treated a number of cases of ringworm, mostly contracted from cattle, by the following method, with perfect success in every case. The part is first washed with a strong solution of sodium bicarbonate, then swabbed with lint moistened with spirit of ether, to remove grease. It is then dried, painted with tincture of iodine, and at once sprayed with ethyl chloride. The spray is continued until the integument becomes china-white, and then stopped. In from 24 to 48 hours the patch is quiescent. After that little spots should be looked for and treated; these will disappear in a few days. In ringworm of the scalp three or four applications are usually required; in the face or other part where the skin is smooth one application should be

sufficient. In an editorial note in the same issue it is remarked that the ringworm caught from cattle is due to Megalosporon ectothrix, which is most easily killed. The treatment may prove suitable in other varieties, but the evidence at preseut is insufficient.

Petrol as a Therapeutic Agent.—Stephens (Dublin Journal of Medical Science) enumerates many uses to which ordinary "petrol" or motor spirit may be put. In pediculi capitis, it is the remedy par excellence, not only terminating the life of the parasite, but having a good solvent action on the nits as well. As a scalp cleanser it is most valuable; in alopecia areata it has proved useful; in ringworm and in scabies it succeeds where other remedies have failed. Its great penetrating powers, together with its solvent properties, make it useful in many skin affections. Burns of all kinds, and especially those produced by the spluttering of hot metal at steel, copper, or spelter works, are greatly benefited by the early application of petrol. At the author's suggestion, several of the works in his district have a quantity of petrol ready at hand in a spray, whence it is blown on to the wounds, which are then covered with a dusting powder of iodoform, salicylic acid, and boric acid. Its application by means of a spray tends to the cleanliness of the method, which, in the case of cuts, is of especial value, as it allows of the stitches being put in at the surgery without any further preparation. The value of petrol in burns is, in the author's opinion, due to the fact that it destroys all germs that have been conveyed from the filthy clothes to the wound, and at the same time interferes with the broken-down, half-burnt skin cells, from which enzymes have been set free. These enzymes being closely related to ptomaines, are undoubtedly responsible for the poisoning which always takes place in metallic burns, whereby the process of healing is prolonged for weeks. The author adds the necessary word of warning as to the inflammability of this substance.

The Administration of Neosalvarsan.—Guthrie (London Lancet). The following method has been used by Dr. Guthrie at the St. Louis Hospital, Paris, for over a year: The patient's arm is prepared in the usual way. Ten c.c. of cold boiled distilled water is placed in a sterile beaker and the required dose of neosalvarsan added. This dissolves immediately, forming a solution that is practically isotonic. Intravenous injection is made with a glass syringe of 10 c.c. capacity. To fill the syringe, the needle is replaced by a short tube having a plug of sterile gauze; this keeps back any undissolved particles. The needle is then replaced and the injection made, the whole proceeding occupying about two minutes. The advantages are that no saline solution is required, the apparatus is simple, and on account of the rapidity of the method there is less risk of oxidation.

Incontinence of Urine in Children.—Simpson (Edinburgh Medical Journal) says that incontinence exists when at the end of its third year the child is given to bedwetting in spite of all systematic attempts to correct the habit. Above all, of course, the fundamental cause must be removed, so far as that is possible.

Next, in the management, come general measures designed to increase bodily vigor and to obviate possible contributive, irritative factors, in the nature of feeding and dressing, and the like. Under this heading may be named change of environment, fresh air life, hydrotherapy, nutritive but non-stimulating food (coffee, tea, spices forbidden), plenty of water to drink in the day, but scantily or none with and after supper, emptying of the bladder at definite hours and intervals (particularly upon retiring for the night, and waking the child two or three hours later, to urinate), light bed-covering, sleeping lying on the side, and, perhaps, elevation of the foot end of the bed and a pillow under the hips. Hypnotic suggestions.

The medicinal treatment, if at all indicated, must be systematic and extend over many months, and, among the remedies, he places belladonna at the head; herein following Thursfield, who, though, includes potassium citrate and hexamethylenamine (urotropin), because of their influence upon the urine. Of course, the urine must be systematically tested.

When the urine is practically normal, the patient is toned up, with strychnine as the medicinal agent. After a while the atropine course is cautiously instituted, starting with minute dosage, very gradually augmented, and keeping the child just within the limits of tolerance (as evidenced by throat and eye symptoms). To be continued until absolutely cured. While the author gives the preference to the belladonna over the alkaloid, this is exactly the time where the superiority of reliable atropine granules given to physiologic effect, can brilliantly be demonstrated.

Pulmonary Tuberculosis.—Alexander (Med. Klin.) since 1889 has advocated systematic injections of camphor in pulmonary tuberculosis to sustain the heart. The dose is 0.1 gm., repeated every day for a month, then dropping to 0.03 or 0.05 gm.,

keeping this up for months without interruption. Even with a tendency to hemoptysis this answers without morphine. No drugs are required in the first stage of tuberculosis, but where fever keeps up and there is a tendency to hemoptysis and emaciation camphor benefits in every case, no matter how far the case is advanced.

Pneumonia.—Leo (Mun. Med. Woch.) experimenting on mice against pneumococcus infection by subcutaneous injections of a saturated aqueous solution of camphor, found that they were protected against infection; in rabbits the results were not so constant. These experiments suggest that camphor should be given from the onset of symptoms in pneumonia. The Doctor suggests about 150 to 200 c.c. for a weight of 145 pounds; and he prefers Ringer's fluid to plain water as the vehicle. Seventy-five c.c., corresponding to 0.1 gm. camphor, can be injected intravenously without disturbance. This is supported by Lenzman, who is shortly to publish his experience in this line. Boehncke has already reported favorably on camphor plus pneumococcus serum.

The Treatment of Dysentery.—Lukis, in The British Medical Journal, says that in bacillary dysentery we may adopt either the saline or the bacteriological methods of treatment; but in the amebic form of the disease we must rely upon ipecacuanha or emetine.

There are two methods of treating bacteriologically a case of bacillary dysentery: (1) The use of a vaccine, thus producing an active immunity; (2) the use of antitoxic serum, thus raising passively the immunity of the patient.

Much work on vaccines has been done in India by Forster. His vaccine is prepared with the Shiga-Kruse bacillus, which he uses for all types of bacillary dysentery. The Dr. uses it in both acute and chronic cases, but in acute cases it is contraindicated from the fourth to the twenty-first day. After this period inoculation may be commenced with an interval of ten days between each dose. In both acute and chronic cases the dose recommended for an adult male is: First dose, 0.1 Cc.; second dose, 0.2 Cc.; third dose, 0.3 Cc.; fourth dose, 0.4 Cc. Females and children are given proportionately smaller doses. According to Forster, these doses produce little or no negative phase, and in fourteen days the immunity is considerably raised, whilst a course of four doses usually suffices to get rid of all bacilli and to prevent the patient from becoming a chronic "carrier." Most authorities consider that on account of the severity of the local reaction and the risk of producing a negative phase, the vaccine method is best reserved for chronic cases, and that in acute cases it is inferior to the serum and saline treatments. Certain experiments, however, are now being made with "sensitized vaccines," which, as we are all doubtless aware, consist of bacilli which have become coated with specific antibodies, as the result of exposure to the action of an immune serum. Such bacilli are now "sensitized" and do not lose this property when killed by heat. As the result of this sensitization they are more easily dealt with by the leucocytes, and the toxicity of the vaccine is decreased, whilst its immunizing power remains unaltered. For these reasons Lukis is disposed to think that there is a great future before these sensitized vaccines, and that it may be necessary ere long to modify our views as regards the unsuitability of vaccine treatment in the acute stages of disease.

Antidysenteric Serums.—These may be either monovalent or polyvalent, but the highest degree of immunity is conferred when the Shiga-Kruse bacillus is used in their preparation. These serums are of the greatest value in the acute stages of the disease, especially if there be profound toxemia unaffected by other forms of treatment. The dosage depends upon the strength of the serum used, and is, as a rule, marked on the vial, but it is necessary to give it in large doses, the injections being made with the usual antiseptic precautions, under the skin of the abdomen or flank. Thus the serum from the Lister Institute should be given in 20-Cc. doses twice or even, in severe cases, four times daily. The interval between the doses should be six hours. They need not, as a rule, be continued after the second or third day, and the only untoward effects likely to follow are urticarial rashes and other anaphylactic phenomena such as pain in the joints, etc. Text-books tell us that these complications may be avoided by the administration of calcium chloride or lactate. Experience does not support this statement, but it may be taken as granted that grave anaphylactic phenomena only occur when the interval between the doses is long or irregular. The remedy, therefore, is regular and systematic administration of the serum.

When the serum treatment cannot be carried out, or when you get the patient in the first day of the disease, the saline treatment is the most useful. Indeed, in many early cases it suffices for a complete cure. Two drachms each of magnesium sulphate and sodium sulphate dissolved in one ounce of water should be administered, and then half doses of a similar mixture should be

given every hour or every two hours until the motions become feculent, after which it is given every three or four hours for another twenty-four hours and then discontinued; but do not stop it too soon, otherwise the patient will still suffer from fecal retention, even though he be passing a large number of stools containing only blood and mucus.

Up till recently our only method of treatment of amebic dysentery was by huge doses of ipecacuanha. This treatment, if persevered in, was undoubtedly efficacious, but the nausea caused by the drug was so severe that it was extremely difficult to persuade patients to take it. To remedy this a de-emetinized ipecacuanha was put on the market some years ago, but this proved to be useless, and they were reluctantly compelled to return to their old methods. Recenrly, however, the treatment of amebic dysentery has been revolufionized by the researches of Vedder in 1911 and by the discovery of Rogers that the amebæ can be quickly killed by the hypodermic injection of emetime, and that, when given in this way, the patient experiences no nausea or discomfort of any kind. Both the hydrochloride and the hydrobromide of emetine are equally useful, but the former is more soluble, the latter requiring 2 Cc. of sterile water or saline for the solution of one dose. Rogers begins with 1-3 grain, which is equal io 30 grains of ipecacuanha, but he now gives one grain of emetine each day, in two hypodermic doses of ½ grain each, and he claims that by this method all the amebæ in the body can be killed in from two to four days, the average for a number of cases being 2.35 days. He has also shown that one or two 1-3 grain tablets may be given by the mouth on an empty stomach without exciting any great nausea, especially if they are keratin-coated. This method of administration does not effect a cure as speedily as when the drug is given hypodermically, but it may be useful when for any reason there are difficulties in connection with the giving of the injections.

The hypodermic injection of emetine is also a valuable aid to diagnosis. If one has a case which is suspected to be amebic dysentery, but which does not react to emetine within three days, one may be sure that the diagnosis is wrong, and one need waste no further time in treating it as such. Moreover, the powerful effect of emetine on amebic cases, compared with its uselessness in bacillary cases, may be taken as strong proof that amebic dysentery is really a separate entity. That is why in the earlier part of this paper Lukis states that we might reject the view that intestinal amebæ play no part in the causation of this disease.

The Treatment of Infections by Means of Fixation Abscesses.—Dr. de Lostalot, in The London Lancet, is trying to revive a method invented by Fochier more than 30 years ago. He says that those who have tried it are convinced it is of great value.

"The cases in which it may usually be employed are the following: Puerperal septicemia, infectious pseudo-rheumatism, pneumonia, appendicitis, typhoid fever, and similar conditions.

The method of forming a 'fixation abscess' is as follows: Two cubic centimeters of pure essence of turpentine are injected under the skin in the gluteal region. In a case of appendicitis it is important to keep as far away from the abdominal wall as possible in case an operation may become necessary later. It is hardly necessary to say that the most rigorous asepsis must be employed in making the injection. A sharp pain will follow at once, but this may be immediately relieved by the application of a hot fomentation. At the end of three days, or four at the most, the abscess will have formed sufficiently. There is no need of a large collection of pus for the production of a phagocytosis. I have often noticed a lowering of the temperature before the formation of the abscess. A small incision, from 2 to 5 centimeters in length, should then be made to evacuate the pus, but the abscess must not be drained, and twice a day a Bier's cup should be applied. At the end of a week the abscess will be healed and the patient will be cured.

As to its mode of action it has been suggested by M. J. Carles, of Bordeaux, that as the pus in a fixation abscess is sterile, for it contains only dead microbes, the abscess attracts micro-organisms from the blood, and that they are killed when they arrive there, though it is certain that in some cases living germs are to be found in a 'fixation abscess.' As the mode of action is up to the present by no means certain it is best perhaps to acknowledge that the method is really empirical, though of great value.

I am very anxious to extend more widely the use of this method of treatment, and therefore in this paper I am giving an account of the procedure and the conditions in which it is likely to be of use. Certain complications have been attributed to this method, such as pain, separation of the skin, and secondary infection of the abscess, but these when they occur are really due to the mode in which the treatment is applied and not to the method itself, for if the treatment is properly carried out they do not occur. It is of the greatest importance that time should not be lost in trying other methods before employing this; it is far better to

form a 'fixation abscess' and then the other methods can be used as well."

Cyclic Vomiting in Children.—Ashby, in The London Practitioner, says that cyclic or periodic vomiting occurs only in children and consists of severe attacks of vomiting, coming on at intervals and appearing in a period of good health. The attacks come on without any warning, and stop almost as quickly as they begin. Children subject to these attacks nearly always come of a neurotic stock, and are easily excited and upset; it would appear as if a less amount of toxin would set up an attack than in normal children. The characteristics of the condition seem to be simply the continuous vomiting, which starts suddenly in a child, in whom nothing abnormal can be made out either in the abdomen or chest. In any child taken ill with acute vomiting, if the abdominal or chest condition can be eliminated, the likelihood of cyclic or recurrent vomiting must be thought of. The absence of much rise of temperature in a child so acutely ill, the presence of the very quick pulse, the sweetish smell in the breath, with acetone and diacetic acid in the urine, will all help to make us more certain of a definite diagnosis. The prognosis is generally good, although the children become very much run down and exhausted. The interval between the attacks may be as short as three or four weeks or as long as a year. The one fact that is evident is that acidosis is present. The opinion was formerly held that there was deficient oxidation, especially of fats; that, in consequence, there was an accumulation of oxyfutyric and diacetic acid in the tissues; and that the symptoms of the disease were the result of these toxins, the vomiting being simply an effort to get rid of them. A more reasonable theory is that there is an intestinal toxemia, most likely due to the liver, and that the acidosis, as shown by the acetone and the diacetic acid, are simpiy the result, and not the cause, of the trouble. In support of this is the fact that the acetone and diacetic acid do not appear till the attack has well begun. It looks as though the carbohydrate metabolism were upset, as these cases improve very much when glucose is given in large quantities during an attack. On the theory that the liver is at fault, and that there is an absence or nonusage of the carbohydrates, we give sugar in large quantities during an attack and, if possible, before an attack comes on. The best way is to give it as glucose in soda water, giving an ounce of glucose every two hours by the mouth, if possible. The children get very thirsty during an attack, and a good deal is vomited, if a drink of the glucose and soda water is given soon after an attack of vomiting, some of it will be absorbed before the next attack of vomiting comes on. The glucose should also be given per rectum in large quantities. The bowels should, of course, be kept freely moving with enemata, and if the child during an attack is getting worn out a small injection of morphine may be given to diminish vomiting and secure rest.

Roentgen Therapy of Tuberculous Lymphatic Glands.—Philipowicz (Wien. klin. Woch.) believes that the Roentgen treatment of tuberculous glands rarely fails if a correct technic be employed. Of 26 cases treated in this manner, 22 were later examined and three reported by letter, and in all of these the results were satisfactory, the lymphomata having completely disappeared or having been greatly reduced in size. Fistulæ rapidly closed, scrofulodermata healed, and in some instances there was a gain in weight. This was accomplished in spite of the fact that only four of the patients submitted to the treatment for a sufficient length of time. Both the hyperplastic indurated glands and those in which softening had already occurred responded equally well to the rays. Ordinarily after three to five applications a reduction in the size of the lymphomata and a closure of fistulæ was observed. To obtain a complete cure, however, an average of fifteen sittings is required, which corresponds to four or five months' treatment. This method is not adapted for patients under ten years of age, owing to the possibility of disturbances of growth, and in the presence of marked anemia or phthisis small doses should be cautiously employed. The advantages of Roentgen therapy are the rapid and certain recedence of glandular swellings, the fine scars following the closure of fistulæ, the favorable influence upon the general condition, and the avoidance of any subjective disturbances.

Duodenal Ulcer.—Schutz (Wien. klin. Woch.) states that the ratio of frequency between duodenal and gastric ulcer is one to two. In 87 per cent. of his cases the patients were males, the vast majority being below sixty years of age. As regards the symptomatology, he coincides with Mopnihan. In discussing the operative treatment, he is not strongly impressed with the value of gastroenterostomy, and is inclined to believe that unilateral exclusion of the pylorus may prove the better procedure. In his opinion, however, many cases may be cured without operation. The internal treatment differs from that of gastric ulcer in that the patient receives frequent small meals of solid food (at intervals

of about three hours) and also large doses of alkalies in combination with belladonna, this medication being continued after the cessation of the attacks. Sometimes the rest cure and dietary suggested by Leube with frequent administration of small amounts of milk best answer the purpose.

The Organic Theory of Chorea.—Delearde and Valette (Arch. de med. des enf.) say lhat one of the most recent theories of the etiology of chorea is that it results from organic changes in the nervous system. They have studied twelve cases of chorea and have looked for signs that in other affections are supposed to be due to organic lesions of the nervous system. Jouffrey har put forward the theory of a maldevelopment of the nervous system, or rather a hypersensibility of that system, which remains latent up to rhe time when it is put in action by the occurrence of an infectious disease, such as rheumatism, grippe, an eruptive fever, etc. The organic theory regards the changes as only the resalts of an infection: such infection manifesting its presence by the production of organic changes, which constitute an efficient cause of the chorea. Thomas localizes the chacges in the cerebral cortex. The writer says that the lesions are slight. and reparable since Sydenham's chorea is easily cured. But we must remember that many autopsies have revealed no organic lesions. The signs of organic lesions that are to be looked for are numerous and complex. They are muscular hypo tonia, changes in the refleaes, and combined flexion of the thigh and trunk. Their absence in hysterical hemiplegia, and presence in true cases where autopsy reveals organic changes goes to show that they result from teese organic changes. Also there is a marked difference between the demeanor of a choreic and a hemiplegic under examinatiour The choreic is nervous, irritable, agitated, while the hemiplegic is calm and quiet. In chorea hypotonia is evidenced by exaggerated flexion of the forearm, hand, shoulder, and pronation of the hand. Combined flexion of the thigh and trunk is seen in about one-quarter of the cases. Lessened muscular force was seen in three cases. The reflexes were exaggerated in three, normal in seven, abolished in two of the twelve cases. What Thomas calls the pyramidal he found present in two-thirds of his cases. They performed lumbar puncture in ten of their cases. In none of them was there any positive result from the examination of the fluid. There may be present in chorea various indications of mental troubles, such as irritability, modifications in character, and lack of memory or intelligence. The authors observed such phenomena in two cases. They conclude that the signs of lesions of the nervous system have not been observed in these cases with sufficient frequency to show an organic origin of chorea.

Use of Aromatic Arsenic Preparations by Rectum in Infants.—Weill, Morel, and Mouriquand (Arch. de med. des enf.) state that although the venous injection of salvarsan is preferable in adults it is somewhat dangerous in infants, and the introduction of the drug by rectum is to be preferred. The veins are so small and a slight movement of the infant while the needle is in place may make so much difference in the absorption of the drug that it is best not to inject it. They have used the rectal method in late hereditary syphilis, severe chorea, and other diseases. In a case of hereditary syphilis there was limitation of the lesions in less than twelve days, and they began to retrocede. At the end of four weeks the perforation of the palate was healed, sight was better, and the parenchymatous keratitis was improving. Arsenobenzol seems to have a good effect in chorea, even of the severe form. Its action is rapid, but not enduring. The injection should be followed by arsenic internally. The authors conclude that this method is good in late heredosyphilis, and severe chorea, and that the passage of arsenic into the urine proves that it has been absorbed by rectum.

Errors in the Diagnosis and Treatment of Diseases of the Joints.—Luff (The London Lancet) states that the confusion of these two diseases of the joints in their chronic forms is one of the commonest errors. Rheumatoid arthritis occurs most commonly in females; gout occurs mostly in males. Rheumatoid arthritis occurs more commonly among the poor and ill-nourished; gout mostly among the well-to-do and well-nourished. In rheumatoid arthritis there is very little pain at first. There is some aching in the joint, but it starts in a very insidious manner. It is this insidious character of the disease which is one of its bad features, for the patients do not seek advice until the affection is fairly advanced. Chronic rheumatic affections of the joints are generally accompanied by the formation of fibrous nodules, by the development of extraarticular fibrous thickening, and not infrequently by the indication of valvular disease of the heart. Chronic fibrositis of the joints is most frequently met with in the knuckle and finger-joints of those engaged in hard manual labor, especially when associated with damp surroundings. In its early stages acute rheumatoid arthritis may very closely simulate acute rheumatism, but it may be distinguished from it by not reacting to treatment with salicylates.

The disease usually commences in one joint, commonly one of the metacarpophalangeal articulations, and then rapidly spreads to other joints. The disease does not flit from joint to joint as in cases of acute rheumatism, and the joint swellings are persistent. The swelling is at first due to periarticular thickening rather than to effusion. Rapid muscular wasting, vasomotor troubles, and pigmentation occur. In the acute and subacute stages the temperature is raised, but as a rule is lower than in acute rheumatism. It is very common error to mistake a chronic villous synovitis, usually of one or both knees, for an arthritis. Chronic villous synovitis is a purely local condition and not a manifestation of a general disease. It is, unfortunately, described in some textbooks as "arthritis sicca." It usually occurs in the knee and is characterized by crepitus or creaking on movement and by pain and tenderness on use.

New Method of Treating Chronic Colicystitis and Other Bacterial Infections.—Russ has shown, according to The London Lancet, that certain bacteria suspended in an electrolyte through which a current passes aggregate at one or other of the electrodes during the passage of the current, and that the aggregation varies with the nature of the electrolyte and is probably due to affinity between the products of electrolysis and the bacteria. The Dr. subsequently found that electrification of the bacteria in certain solutions kills them. Since nearly all pathogenic bacteria move to the positive pole during electrolysis in sodium chloride solution, he thought they might be drawn out of ulcers and infected mucous membrane, etc., if a column of sodium chloride were superimposed on the diseased area and a current passed in the appropriate direction. If the positive pole were submerged in such a column of saline and the organisms drawn to it by the current, then, as the tissues became free from the bacteria, recovery would ensue. Incidentally also the bacteria would be killed during the process. Several years ago the Dr. commenced this study by applying the above mentioned ideas to chronic varicose ulcers of the legs. These are lesions which can be seen during treatment and are accessibte and easily measured. These ulcers were of years', months', or weeks' duration, and were systematically measured as to their greatest diameters before each treatment. In the first case, to estimate the number of bacteria withdrawn by the process, a control was undertaken by planting a sample of the saline (stirred over the ulcer) before polarization, and counting the colonies which developed from 1 c.c. and ½ c.c. on agar plates, and also after polarization for ten minutes. The result, namely, no growth in the second set of plates, was a sharp reminder of the importance of the bactericidal effect of the treatment, in addition to any effect of drawing organisms out of the ulcer. The author next sought to determine whether the bacilli might not be withdrawn from the bladder in colicystitis. The technique employed was as follows: The patient, who had voided his urine, reclined on a couch and a broad abdominal belt of layers of line was passed arouud the lower part of the trunk. This belt, which carried a core of metallic gauze, was wrung out with warm salt solution before application. Next a rubber catheter, furnished with several perforations round its eye, was passed into the bladder. The free end of this catheter was connected to eight inches of glass tubing, which in turn was joined by a short length of rubber tubing to a glass funnel—everything being sterilized. A few ounces of the salt solution (2 per cent.) were next passed into the bladder, and the glass tubing, after disconnection from the funnel, was clamped a little above the level of the pelvis. A platinum wire six to eight inches long was next passed down the catheter to within two inches of its eye. This wire was connected to the positive and the core of the belt to the negative pole of the electric battery. The fluid in the bladder rose and fell in the glass tubing with the respiratory movements and its movement served as an indicator that the catheter eye was within the vesical cavity. A constant current was now gradually turned on to a magnitude of three to five milliamperes and was allowed to run for twenty or thirty minutes. The method of treatment has a germicidal effect and also draws the organisms electrically from the affected parts.

The Manner of Mercury's Action.—Eason (Edinburgh Medical Journal) mentions the manner in which mercury probably acts when applied in the treatment of syphilis.

According to Blumenthal the liver appears to play an important part in the action of mercury. He believes that this is secondary to the mobilization in the liver of protective substances which form with the mercury the specific mercurial combination.

In these views he is supported by Schrauth and Scholler. In further support of his views Blumenthal adduces the fact that all mercurial combinations hitherto found active in the treatment of syphilis are fixed in the liver, while those which are not so fixed have no such therapeutic value. Accordingly, the efficient treatment of syphilis by mercury must depend on the efficiency of

the liver reaction. The observations that have been made on silver suggest that its method of action is somewhat similar, viz., by the formation in the body of a specific silver compound. Rosenstein, Wolff-Eisner, and others have also proved that silver stimulates protection processes, as shown by hyperleucocytosis.

When the bactericidal action is an indirect one, as in the case of mercury and silver, it is not surprising that animal experiments frequently give results which do not harmonize with clinical experience. And this is equally true whether the indirect action is due to the formation of a specific combination of the metal or to the production of protective substances. Such processes will vary in different species of animals in rapidity and in degree, and these variations in response determine the effectiveness or ineffectiveness of the chemical substance employed.

With such indirectly acting substances similar variations, usually within narrower limits, will be found also in individuals of the same species. The capacity of the organism to react for the formation of healing substances is of vital importance. It is thus intelligible that in apparently analogous cases strikingly favorable and unfavorable results may be obtained, depending on the presence or absence of sufficient reaction. In the case of substances which act directly reaction plays no significant part.

Cystitis in the Female.—Gibson (Dublin Journal of Medical Science) says that in general the condition of the bladder during pregnancy predisposes to infection, this being due to the congestion and edema, as well as the stretching of its walls. In many instances a relative incompetence of the sphincter will be present This accounts for an easy entrance of micro-organisms.

In post-operative cystitis, according to Baisch, the primary infection is staphylococcal, sometimes streptococcal. Superimposed, may be a Bacillus coli infection, if it be not already present before operation. Regarding the prevention during operation, efforts should be made to prevent infection of the connective tissue about the bladder, and careful technique in closing the peritoneum over the bladder should be employed. When the catheter must be used, the bladder should be douched with a 2 to 5 per cent. solution of boric acid. This, with urinary antiseptics, is likely to be successful in mild cases where the bladder has not been much disturbed. But after the radical operation for cancer of the cervix, cystitis is almost invariable in spite of these precautions. Douching should be employed here for what it is worth to keep the cystitis in control. Five to ten cubic centimeters of a 1 per cent. solution of collargol injected into the empty bladder and afterwards washed out has been recommended for these cases.

In dealing with inflammation of the bladder, we frequently see the cystitis colli in which the inflammatory changes are localized to the trigone. This may be a result of a more diffused cystitis which has become chronic, or of gonorrheal extension, or extension from a urethritis due to some other cause, or as a result of tying in a catheter.

In cases of cystitis colli gonorrheica one frequently finds numbers of polypi of various sizes growing from the mucous membrane around the edge of the sphincter. These may become impacted in the sphincter and cause obstruction.

In treating cystitis colli the only satisfactory method is the direct application of nitrate of silver, protargol, etc., on wool through the urethroscope tube. Attempts to cure this condition by douching are fruitless; in fact they usually aggravate it. The condition is recognized with the cystoscope.

The cystitis in old women is mainly due to an ascending infection. The shrinking vaginal wall pulls the outer lips of the urethra apart. The elasticity and capacity of the bladder are reduced. The micro-organisms, and particularly the colon bacillus, ascend to the bladder along the continuously urine bathed urethra.

Acute Intestinal Obstruction Due to Volvulus of the Cecum.—Wrigley and Manfred Moritz, say that intestinal obstruction due to volvulus of the cecum is so rarely met with that it is advisable to record all such cases. The present case is of interest in that the abdomen had been opened five weeks earlier by another surgeon for acute appendicitis, and we have been able to obtain a few notes on the condition of the cecum at that operation.

The patient, a female, aged 29 years, had been in good health, except for three attacks of appendicitis, the last being five weeks before the present illness, when she was operated on and her appendix removed; the wound was sutured without drainage. From this operation she made an uneventful recovery, and left the hospital in two weeks' time.

The history of the present illness is as follows: She was seized with acute abdominal pain in the region of the umbilicus, followed by vomiting and profuse diarrhea. She stated that she vomited greenish fluid and was purged every few minutes, but had not passed flatus for some hours. Twelve

hours after the onset of the attack she was admitted to the Manchester Royal Infirmary. On admission she looked extremely ill, her features were pinched, and her tongue was dry and furred. Her temperature was 100° F., and her pulse rate 114. On inspecting the abdomen it was found to move freely with respiration, and a large mass of the size of a cocoanut was seen in the right iliac and umbilical region, and in this situation waves of peristalsis occasionally occurred. Palpation of the abdomen induced vomiting, which, though not fecal, was suggestive. There was a little involuntary rigidity and extreme tenderness of the abdominal wall on palpating the swelling, which was tympanitic on percussion. Rectal examination revealed great tenderness on the right side of Douglas's pouch. A diagnosis of intestinal obstruction was made and immediate operation proceeded with.

Operation was performed on February 14th, 1912. An incision about three inches long was made through the sheath of the right rectus internal to the scar left by the previous operation, the fibers of the rectus separated, and the abdomen opened. Numerous distended coils of small intestine presented, and there were many adhesions between these, the omentum and the peritoneum in the vicinity of the old scar. The adhesions were separated and ligatured. Further exploration with the hand in the abdomen revealed a large, tense swelling in the middle line of the abdomen; by a little manipulation the swelling was delivered on the surface of the abdomen and seen to consist of an enormously distended cecum, and a considerable part of the ascending colon rotated anticlockwise around its long axis one complete twist, and then acutely flexed, so that the cecum was lying transversely in the abdomen with the fundus of the cecum just beyond the middle line above the brim of the pelvis. The cecal wall was very thin, and presented several gangrenous patches, making it useless to attempt to unravel the volvulus, so, after packing carefully round with gauze swabs, the whole of the cecum and part of the ascending colon, with the terminal portion of ileum, were resected between clamps, the mesentery ligatured, and the diseased bowel removed. The free ends of the ileum and the ascending colon were then crushed by a large Spencer Wells forceps and closed by a stout ligature of linen thread, and each end inverted by a purse-string suture of linen thread. A lateral anastomosis was then made between the terminal portion of the ileum and the ascending colon by continuous thread sutures. The gauze swabs were then removed and the operation area cleansed. The anastomosis was returned into the abdomen, which was closed by a continuous catgut suture through the peritoneum and a similar suture through the anterior sheath of the rectus reinforced by strong silkworm-gut sutures, including the whole thickness of abdominal wall except the peritoneum.

The patient made an uneventful recovery. the bowels being moved naturally on the sixth day after operation. The wound healed by first intention, and she left the hospita, on the twenty-first day. The resected portion of bowel measured 18 inches long by 12 inches in width. It was dark grey in color, and showed many small patches of gangrene which appeared on the point of perforating. The patient has been seen some months later, and was in good health.

Parasyphilis.—McIntosh and Fildes, in The London Medical Lancet, agree with Nonne to the effect that the non-specific theory of dementia paralytica and other nervous affections classed as parasyphilitic must be abandoned, and that such pathological conditions must be regarded as a species of spirilosis. The lesion is not regarded as a direct result of the activity of the spirochæta pallida, but rather to the action of toxins derived from these organisms, which have a particular affinity for certain nerve areas.

It is now generally recognized that an involvement of the central nervous system is of common occurrence in early syphilis, and so much is this the case that Neisser at the International Congress held that no one should be passed as cured of syphilis until the cerebrospinal fluid had been reduced to a fully "normal" condition. Clinically the "involvement" may be recognized by a series of symptoms ranging from a mere headache to a complete mental disability and death. We imagine that the headache is an index of meningitis, usually, no doubt, trivial, but nevertheless definite. In more pronounced cases the process may involve not only the perivascular lymphatics of the pia, but also the perivascular sheaths of the vessels entering the cerebral substance. The spirochæta pallida will be numerous in such lesions. As in the other forms of syphilis, the spirochætæ will tend to leave the neighborhood of the vessels and to invade the surrounding tissues, in this case the brain proper, and in such a manner will occur a subacute or acute encephalitis. If such an acute lesion is rapidly subjected to intensive antisyphilitic treatment the great majority of the spirochætæ will be destroyed and the patient will recover without residual signs. If not he will become mentally deranged and eventually die. These lesions

probably occur in the secondary period, and it will readily be allowed that a small number of spirochætæ may survive and lie dormant during the latent period either in the lymph-vascular tissues or in the brain substance proper. If we now proceed to investigate the state of affairs at a later date in the tertiary period we find that all the tissues of the body which have been under the influence of the spirochæta in the secondary period are in a state of hyperallergie. They have undergone an invisible change as a result of an immunity process, and are hyperimmune to the action of the sensitizing virus. This hyperimmunity is of such a type that the cell will detect and react to a much smaller quantity of virus than was the case in the secondary period; and, further, this reaction will be of an abnormally violent type designed as a protective mechanism, but resulting in the case of delicate tissues in destruction. The cell receptors are so avid that the virus effects an abnormally strong intoxication. This is the explanation of such destructive lesions as the gumma, in which the number of spirochætæ is extremely small. The gumma is, however, a purely lymph-vascular lesion, and is due to a focal reaction about a nidus of spirochætæ which has remained dormant in this position. On the other hand, the gummatous process may be more diffuse, in which case a number of focal reactions will occur. Finally, the lesion may be so diffuse that the focal perivascular nature may be little evident. If such a process occurs in an organ the incidence of the intoxication will also fall largely upon the parenchymatous cells and induce in them an excessive destruction.

From the above account it is clear that cerebrospinal syphilis is due to a reaction in the altered lymph vascular tissues of the meninges and vessels, and since it is thus focal the brain substance will be little involved. If, however, an exacerbation occurs in a nidus of spirochætæ which has been left latent in the nerve tissues from a previous encephalitis, an excessive reaction will follow in these tissues, and will lead to degeneration of the nerve cells.

The cerebrospinal syphilis is due to a tertiary hyperallergic reaction in the vascular tissues, while parasyphilis is due to a tertiary hyperallergic reaction in the nerve tissues and accompanying interstitial tissues. The infiltrations about the vessels do not suggest the presence of the virus therein, but represent an effort on the part of the wandering cells to reach the neighborhood of the lesion in order to produce a gumma. They are prevented from gaining this position by the adventitial sheath which surrounds the vessels.

According to this view there is no essential difference between the lesions of encephalitis of the secondary period and encephalitis of the tertiary, except in the greater susceptibility of the tissues in the latter. Thus a particularly toxic secondary encephalitis might simulate the clinical symptoms or even the pathological appearance of dementia paralytica.

Torn Semilunar Cartilages.—Robinson (British Medical Journal) reports his observations of 24 cases. Of these 22 were tears of the inner cartilage, and two of the outer. The patients were all males, usually of the muscular, robust type. The Doctor has never seen a simple dislocation of a semilunar cartilage without tearing of the cartilage. There can be a tear without a displacement, but no displacement without a tear. The author discusses fully the anatomy and mechanism of the injury. The diagnosis can be made entirely from the history. In nearly every case the following facts may be elicited:

1. A severe twist of the flexed knee or a severe blow on the side of the flexed knee, with or without the patient falling.

2. A sickening pain, and often a sensation of something having given way in the joint.

3. "Locking" of the joint, that is, inability to extend the limb (if the anterior part of the cartilage be torn) or, much less often, to flex it (if the rent is in the posterior half). The joint sooner or later goes straight of itself or by a special effort on the part of the patient, or is pulled straight by someone—generally with a feeling as if something had slipped into its place.

4. A temporary effusion into the joint (traumatic synovitis).

5. One or several recurrences of the above symptoms, especially of "locking" of the joint on slighter but similar accidents, such as slipping off a curbstone, twisting the leg in walking, or even turning over in bed.

When the patient applies to the surgeon often nothing can be made out on examination of the joint except some tenderness over the injured meniscus—inner or outer, as the case may be. If the femur has been rotated inwards (or the leg outwards) almost always the inner meniscus will be found torn. If the rotation of the femur is outwards (or of the leg inwards) one cannot be so certain that it will be the outer meniscus that will be found ruptured.

The only treatment in workingmen is removal of the offending cartilage.

Murder by Drowning.—Meyer (Zeitschr. f. Medizinalbeamte) mentions a case in which a policeman was convicted of drowning his wife, and incidentally raises the

question, "How long is a drowning person able to call for help?" The wife in the case referred to was heard calling for help 9½ minutes before the final cries were heard, the latter being more subdued and coming from the direction of the water. From this it was concluded that she was attacked on land and that she had not fallen accidentally, as was alleged, into the water.

He bases this opinion upon the most recent researches of Wachholtz and Horoszkiewicz, who differentiate five stages in drowning, viz., (1) stage of surprise characterized by one or two inspirations and subsequent expirations—duration 4 to 16 seconds; (2) stage of voluntary stoppage of respiration in order that water may not be inspired —duration, 21 to 60 seconds; (3) stage of deep respiration, in which, with eyes open, the person breathes and water is swallowed —duration, 60 to 150 seconds; (4) stage of respiratory cessation with loss of sensibility and dilatation of the pupils—duration, 60 to 96 seconds; (5) stage of terminal respiratory movement—duration, 29 to 50 seconds. From the above it appears that death in drowning occurs in 4 to 5, or, in rare cases, in 6 minutes.

From a consideration of these phenomena in drowning, it was held to be impossible for a person in the water to emit loud calls for help at intervals extending over a period of 9½ minutes.

An interestiug circumstance in the case was that when the body was recovered next day from the water one hand was firmly grasping a key. Notwithstanding, therefore, her probable struggle in the water—death was due to drowning—she had this hand closed, a fact which might be held to favor a theory of suicide rather than of involuntary drowning.

Miscellaneous.

WANTED—Copies of Transactions of State Medical Society for following years: From 1858 to 1884; and for 1885, 1886, 1887, 1889, 1890, 1893, 1908 and 1910.

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The Virginia Public Health Association will meet at the University of Virginia April 23 and 24 under the presidency of Dr. Mosby G. Perrow, Health Officer of Lynchburg. The program is not yet complete but a number of prominent sanitarians have accepted invitations to deliver addresses or read papers, among them Dr. Harvey W. Wiley, Dr. William C. Woodward, president of American Public Health Association, Dr. Cressy L. Wilbur, Chief Statistician of the Government, Dr. L. O. Howard, Chief of Bureau of Entomology, Dr. Ennion G Williams, State Health Commissioner of Virginia, Dr. J. W. H. Pollard, Washington and Lee University, Dr. Stephen H. Watts, University of Virginia, Dr. Allen W. Freeman, Virginia State Health Department. Symposia will be held on various topics, as follows: Symposium on Vital Statistics, Dr. W. A. Plecker, chairman; Symposium on Milk, Dr. W. Brownley Foster, chairman; Symposium on the House Fly, Dr. E. C. Levy, chairman; Symposium on Medical Inspection of Schools, Dr. Roy K. Flannagan, chairman; Symposium on Communicable Diseases, Dr. Powhatan S. Schenck, chairman.

Medicine and Divinity.

A writer in the British Medical Journal, October 4, 1913, narrates the history of Sir Francis Milman, who was admitted a Fellow of the Royal College of Physicians in 1778; but apparently just about that time he was nearly lost to medicine and gained by the Church, for he took the degree of bachelor of divinity at Oxford on November 10 of that year, and soon thereafter resigned his appointment as physician to the Middlesex Hospital. The intention, however, was abandoned, and he is found to be, in 1785, physician extraordinary to the King's household; and then, having, so to say, put his foot on the ladder, he is seen mounting steadily—physician to the household, physician extraordinary to the King, physician in ordinary to the Queen, and, in 1806, physician in ordinary to the King. He was created a baronet in 1800. If Sir Francis at any time regretted that he did not leave medicine for divinity he must have been consoled to some extent by the fact that he lived to see his third son (Henry Hart Milman) take orders (1816); in that year also a grandson was born (Robert Milman), who was in time to come (1867) to be bishop of Calcutta. Henry Hart Milman also rose high in the Church, being made dean of St. Paul's by Lord John Russell in 1849; he was known as "the great dean," and is now remembered for many of his literary undertakings.—Medical Record.

"Elixir Saloform Comp., Flexner." Contains 20% Alcohol. An efficient remedy for Rheumatism, Gout, Cystitis and Uric Acid Solvent. Prepared for physicians' prescriptions only. Robinson-Pettet Co., incorporated. (See page xiv this issue.)

Drink, Drugs and Sudden Death.

The vision of sudden death in Harriston, Mississippi, in the early morning of September 28, when two young drug-crazed negroes were lynched after they had "shot up the town," killing nine other men of both races and wounding seventeen, brought from the Northern press no shuddering exclamations over the Southern sin of lynching, nor did the "race riot" headlines of one day's news go uncorrected on the next day's editorial page. "The part played by the white men who became victims was devoid of race unfairness, wholly an attempt to vindicate public order," says the Brooklyn Eagle; and "even the lynching, performed in the presence of a company of non-interference militia, was free from any doubt as to the identity of the negroes hanged, and was free from brutality save in the hanging." The people of the vicinity of Harriston are. in the St. Louis Globe-Democrat's opinion, "entitled to still greater praise for the self restraint and sense of justice they displayed." For the press, North and South, agree in attributing the killings in Harriston "to mania resulting from the abuse of cocaine," and it is the prevalence of the drug habit among Southern negroes that chiefly engages editorial attention. We read, for instance, in the New York Sun:

"That the use of drugs in general is constantly increasing among the negroes of the South has long been known, and it is asserted on seemingly respectable authority that indulgence in this vice is particularly prevalent where prohibition obtains. * *

"The liquor trade in the Southern States had characteristics of unspeakable vileness and criminality, which drove thousands of respectable men not opposed to the sale of decent liquor under respectable conditions into the ranks of the 'drys.' When drink was made inconvenient to obtain, the drug venders found a rich field. Their wares are peddled in many forms, and the effects they produce on their victims are even worse than those chargeable to alcohol. Various schemes to keep the mixtures containing the drugs out of the hands of any except medical men and pharmacists have been suggested, but none of them has met with particular success, either in the South or in the North."

Race antagonism is ever present in Southern communities, the Sun reminds us, and "men low enough to furnish drink and drugs, regardless of the consequences, are found in every community." Laws, it adds, "may easily be passed, but how are they to be effectively enforced?" Yet it is to law that the Southern press turn. To quote the New Orleans Picayune:

"Such outbreaks as occurred at Harriston are always possible in every part of the country where the negroes are numerous. The great majority of the colored people are peaceable enough, but there is a small element capable of attempting any sort of crime when crazed by drink or cocaine. How best to deal with this dangerous element is a problem not easily solved, but it ought to be possible to stop the sale of habit-forming drugs to negroes by imposing heavy penalties on all persons caught in such traffic."

"All through the South," declares the Washington Times, "drugs and drugged liquors are bootlegged through dry communities, to the depraved elements of society, and constantly are inciting to such crazy crimes," and it concludes:

"State and national legislation alike are absolutely necessary to end the horribly demoralizing traffic in drugs and worse-than-whiskey liquors that are sold constantly in increasing quantities."—The Literary Digest.

Army Doctors and Typhoid.

An important discussion on anti-typhoid inoculation occupied the attention of the Naval and Military Section of the Congress at the Royal Military College, Millbank, and some important contributions to the subject were made, particularly in regard to the inoculation against typhoid of British soldiers in India. Surgeon-General Sir Launcelotte Gubbins presided.

Colonel Sir William Leishman (Royal Army Medical Corps), Professor of Pathology, Royal Army Medical College, said that since he had the honor, in 1907, of acting as reporter on this subject at the International Congress of Hygiene at Berlin, anti-typhoid inoculation had come to occupy a very important place in military medicine. At that time it was very far from being generally accepted as a practical measure, although its protective value was recognized by most bacteriologists. Now he thought it might be said to be generally regarded as one of the most powerful weapons in the fight against typhoid fever.

In the Army they had now accumulated a very considerable body of experience in the practical use of the vaccine. They were the first to adopt the method as a preventive measure on a large scale, and, although its general acceptance had been a slow process, and it still remained on a purely voluntary basis, it was now widely taken advantage of by the soldiers, and had few, if any, strong opponents in either the combatant or the medical branches of the Army. The Army Council had given every support to

their endeavors to secure as many volunteers as possible.

On the whole, he regarded the average duration of the protection conferred by their system as two years, and he thought that after this time had elapsed the individual, if still exposed to the danger of infection, should be reinoculafed.

With the Army in India in 1890 there were 1,253 cases of typhoid and 332 deaths. Anti-typhoid inoculation was reintroduced in India as a voluntary measure in 1905; but it was not until the year 1909 that the number of men inoculated became sufficiently large to influence the general statistics. From that year there had been a steady and very remarkable decline, the figures for each successive year constituting a fresh low record until in 1912 they found that there had been only 118 cases of typhoid fever in the whole of the British Army in India—a gratifying contrast to the large figures recorded in the past.

Those of them who had been responsible for inoculation had always owned in the fullest manner that vaccine had not been the sole factor in this remarkable change. Improvements in general sanitation, improved methods of diagnosis, the detection and isolation of "carriers," had undoubtedly all played a part; but his strong personal conviction, shared, he was glad to know, by many of his brother officers, was that the reduction was in the main due to the extended employment of anti-typhoid vaccine.—Dominion Medical Monthly.

Prof. Janeway at the International Medical Congress (Section of Therapeutics) dealt with the problem of the comparative value of cardiac remedies from the clinical point of view. Inasmuch as it was impossible to separate the parts played in circulatory disorders, by the heart and the blood-vessels respectively, he extended the subject to include certain drugs whose main effects were exercised upon the latter, such as caffeine and the nitrites. In chronic venous engorgement and stasis he had obtained good results from the Karell diet as an auxiliary to digitalis therapy. He had not himself often resorted to the intravenous use of pilocarpin, but he admitted the striking results which were often obtained in this way. In his opinion the choice of the best preparation of digitalis lay between a preparation from the standardized leaves and digpuratum.

He did not himself use or recommend the relatively large doses advocated by Cushny and Mackenzie of London. The indications for the use of digitalis had become increasingly precise through the exact study of the rhythm of the heart. Their task for the future was the elaboration of equally accurate methods applicable at the bedside for the study of other fundamental cardiac properties. He emphasized his belief, however, that no improvement in instrumental appliances could ever replaee the skill and experience of a master clinician.—British Medical Journal.

Actinomycosis of the Cheek Treated by Parenchymatous Injections of Formalin.

Makins reports the case of a boy, aged 17, who was admitted into St. Thomas' Hospital in January, 1913. Two months previously an alveolar abscess had developed in connection with some carious teeth. The abscess was incised, and shortly afterward a hard, brawny swelling developed in the right cheek. On admission this swelling occupied an area of about the size of a half-crown piece. It was bluish red in color, very hard, and firmly fixed to the surface of the maxilla. Four discharging sinuses were present, and on examination of the pus exuding from these the streptothrix of actinomycosis was discovered. During the month of February iodide of potassium, beginning with 5 grain doses, rapidly increased to 20 grains, was administered internally three times daily. On February 21 two hypodermic syringefuls of 4 per cent. formalin solution were injected around the periphery of the indurated area and into the margins of the area itself. The injection was followed by considerable swelling of the cheek and lower eyelid. A second injection was made on April 4, after which all the sinuses closed. Meanwhile considerable diminution occurred in the extent of the induration. Further injections were made on April 22, May 30 and July 16. Each injection was followed by considerable local edema which rapidly subsided, after which the indurated tissue became less in extent and freely movable upon the maxilla. The injections were necessarily made around the circumference, since the fluid could not be freely forced into the indurated area. At the present time the cheek is nearly normal, the only fixed spot corresponding with the cicatrix of the largest of the sinuses present when the formalin treatment was commenced.—Proceedings of the Royal Society of Medicine.

The Sedative Action of Lumbar Puncture.

Szedlak has performed lumbar puncture in about 250 cases for diagnostic purposes, and has noticed that in most of these restlessness and excitement diminished or even

disappeared. This led him to practice lumbar puncture as a purely therapeutic measure among the most restless inmates of a hospital for nervous diseases. Lumbar puncture is known to relieve the headache, somnolence, vomiting, and other disturbances following epidemic cerebrospinal meningitis, tuberculous meningitis, and hydrocephalus, in which the intraspinal pressure is raised. It may be that in some cases this pressure is also raised in certain forms of insanity, and that the stimulus to which the cortex is subjected by this pressure can be removed by the withdrawal of some cerebrospinal fluid. Again, if the mental symptoms be due to an accumulation of toxins in the cerebrospinal fluid, a reduction of its volume should be beneficial. The author does not include in his report those cases in which a general anesthetic was given during lumbar puncture, as the resulting beneficial effects may partly be traced to the anesthetic. In most cases he dispensed with anesthetics, and when the patients were very restless he secured the pelvis with a cloth drawn downwards and backwards by two attendants, while a third attendant held the patient's head in his armpit so that the body of the sitting patient was carried forward as far as possible. Thus secured, even the most restless patient is not likely to break the needle. The intraspinal pressure was as high as 300 to 500 mm. or more in the most violent patients, and the liquor squirted forcibly out of the needle when it was opened. Not more than 10 to 15 c.c. were withdrawn at one puncture, lest the sudden reduction of pressure should be harmful. In some cases the immediate result was striking, the restlessness disappearing completely. Sometimes this effect lasted only a few days and a repetition of the procedure became necessary. No good effect was observed in a case of encephalopathic psychosis or one of alcoholic psychosis. In the first case the patient died after six days' continuous and severe psycho-motor disturbance. The necropsy showed a large hemorrhagic infarct of the right parietal lobe. No improvement was effected in a case of paranoia, but in most cases of restlessness in dementia praecox, psychosis epileptica and maniaco-depressiva, dementia paralytica progressiva and melancholia excellent results were obtained. The author gives details of seven cases in which lumbar puncture was very beneficial. —British Medical Journal.

Treatment of Burns.

The best remedy for the treatment of burns of the first and second degree, according to Brietmann, is 70 per cent. alcohol. As soon as possible after the accident, the affected part is placed in a bath of two parts of alcohol and one of water and then covered with a bandage saturated with this fluid. The pain is said to disappear rapidly, the inflammation to be checked and the vesicles to rapidly dry up. Where the vesicles are already open a slight burning will be experienced. The action of the alcohol is chiefly that of a dessicant, while its antiseptic properties will prevent later infections.—Therap. Monatshefte.

Gastric Tetany in the Adult.

Irwin reports thirty-nine cases of gastric tetany in the adult of which eleven recovered. Every drug from calomel to the latest antiseptic was tried. Oddo recommended calomel as a purge every other day, and benzonaphthol in ½ grain doses every two hours as an intestinal antiseptic. Boas recommended the use of diuretics. Gibb used in the treatment of his cases hypodermic injections of morphine and atropine; internally he gave liquor arsenicalis, liquor hydrargyri bichloridi, and sodium salicylate. He also gave a purgative consisting of calomel, podophyllin and extract of belladonna with magnesium sulphate first thing in the morning. Pratt washed out the stomach with boric acid solution and injected morphine hypodermically. Oxygen was also administered, and ether injected hypodermically. Gordon administered 30 grains of potassium bromide and 15 grains of chloral hydrate, but as this had no effect he then gave chloroform, which gave relief for a short time. Numerous authorities recommend gastric lavage, but this is a rather dangerous procedure, as passing the stomach tabe, even a soft one, very often induces a severe attack of tetany. Others have advised the patient to take a large quantity of water, followed by an emetic, but the author cannot find any case recorded in which this treatment has been successful. The only treatment up to the present that has given hopeful results is operation, but even this has not always prevented a recurrence of this grave disorder, as quite a number of cases have had attacks of tetany during the week following the operation. Rectal feeding for a week before the operation would, in his opinion, overcome this difficulty. The patient should have a dose of calomel and then a saline purgative every morning. Fifteen ounces of peptonized milk should be given by the rectum every six hours, and the bowel should be kept well cleansed by giving a saline or soap enema once every twelve or twenty-four hours, and about an hour before the rectal feed. Oral sepsis must be avoided by daily washing the mouth and

cleansing the teeth and gums, and in order to prevent parotitis, at one time a serious complication in cases where rectal feeding has been necessary and food by the mouth had been prohibited, the patient should have a rubber teat to suck. By the above method the attacks become less frequent and less severe, and tend to disappear usually about the third or fourth day of treatment.—Brit. Med. Jour.

Arsenotriferrin in Stomach Diseases.

Extensive experiments conducted by H. Ury with arsenotriferrin in stomach diseases prove conclusively that this preparation has no irritating effect upon the mucous membrane of the gastro-intestinal tract and may be given without hesitation eight or ten days after a hemorrhage from an ulcer. No pains, constipation or increase of hydrochloric acid will result. If the importance of a rapid regeneration of the blood in the case of bleeding ulcers be borne in mind, the value of this preparation will be evident.—Berl. klin. Woch.

On Iodipin Therapy.

Bosse recounts in detail the results of his seven years' experience in the intramuscular injection of Iodipin—Merck His technique is practically the same as that detailed by Hofler. When properly carried out, the injections cause no inconvenience even to sensitive patients. Three should be given weekly and not more than 200 c.c. of Iodipin should be used in one series of injections.

Iodipin is capable of producing extraordinary results in diseases of the heart and blood vessels, especially arteriosclerosis, angina pectoris, cardiac asthma, vertigo, and dysbasia, also in septic conditions. Bad results were never observed and the remedy practically never failed to act beneficially. In a case of mitral stenosis and insufficiency with a rapid pulse and severe occipital headache, all symptoms practically disappeared after six Iodipin injections. Another patient, suffering with a probable subphrenic abscess, complicated by pericarditis, pleurisy and marked cardiac weakness, was cured by iodipin treatment. A temperature curve presented by the author is of interest as it shows the gradual disappearance of fever in a case of gonorrheal sepsis, treated with iodipin injections.

Considering the unequivocal therapeutic results, obtained in certain septic conditions, iodipin is strongly recommended, especially as there is nothing to be lost by its use and often much to be gained. A great part of the curative action of iodipin must be attributed to the influence of iodine on the blood elements, as shown by the marked increase in leucocytes, a fact proven by experiment.—St. Petersburger Med. Zeitschrift.

Treatment of Heart Disease in Children.

E. Cautley writes that reference to standard works of a generation ago showed that the recognition of the frequency of heart disease in children was of comparatively recent origin. Modern methods of treatment were a survival, a modification, and an improvement on those of the past. Especially the improvement depended on the recognition of myocarditis and its results. To some extent treatment was modified by age, for in childhood the heart was a growing organ. Fortunately, the degenerative changes consequent on age, alcoholism, syphilis, and renal disease were extremely rare. Functional disorders were comparatively unimportant. It was urged that in many so called functional cases the primary cause was myocarditis, a sequel of infective disease. Rest was the most important factor in treatment. Its duration must be in proportion to the degree of dilatation dependent on myocardial disease. It was important during rapid growth and in cardiac disorders at puberty, periods at which overstrain must be carefully avoided. The duration of rest differed in endocarditis, myocarditis, and pericarditis; it was most prolonged in myocarditis. Subsequently massage and exercises, passive and active, were useful. Nauheim methods and electrotherapeutics must be considered. In acute inflammations the older methods of bleeding, blistering, and mercurialization were still used in a modified form. Blistering was of doubtful value in endocarditis and myocarditis, but appeared distinctly beneficial in pericarditis. Bleeding was used with caution. Mercury was of value if the liver became congested. The pill of digitalis; squill, and mercury had not been improved upon. Purgation was necessary in edema and backward pressure; and in all cases the bowels should be kept open by mild laxatives, such as senna. Diuretics were also needed, and their action could be assisted by dry cupping over the kidneys. Attention was paid to diet in acute inflammations and in cardiac failure, to the limitation of fluid and salts in edematous states, and to the ordinary diet of compensated valvular disease. In the matter of drugs the value of digitalis and its modern laboratory preparation was referred to. Formerly the infusion was thought the most valuable, now opinion was in favor of the tincture. Diuretin and theocin sodium acetate were comparatively modern drugs. Vaso-dilators

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were practtcally never required. Morphia, aconite, and belladonna might be of value. It was a matter for argument as to what was the value of salicylates in myocarditis and of iodides in inflammation. In peri cardial affections the use of paracentesis and of drainage was considered, as well as the more recent operation of cardiectasis for adherent pericardium.—London Lancet.

Spinal Anesthesia by Tropacocaine

In the Ingleby Lecture delivered by Professor T. J. Morrison at the University of Birmingham, a very favorable account is given of the method of inducing anesthesia by means of injection of tropacocaine into the spinal canal. The account is based on a series of nearly 1,300 cases in which this procedure was employed, the patients being of all ages, from 11 months to over 70 years. The drug is administered in 5 per cent. solution in normal saline fluid, and 1 grain forms an average dose for an adult, After the preliminary puncture is made 2 or 3 c.c. of the cerebro-spinal fluid are allowed to escape in order to delay absorption and to avoid increase of pressure in the canal. When the drug is administered the patient is first conscious of a sensation of warmth, followed by tingling and numbness, in the feet. Soon anesthesia is complete and is accompanied by inability to move the legs and by loss of knee-jerks; the abdominal muscles are relaxed. The mental condition of the patient is generally calm, and abdominal pain, if present, is relieved. Anesthesia lasts for 30 to 90 minutes. Owing to blocking of afferent channels surgical shock is avoided, and after the operation there is little sickness, and food can be given almost immediately. The only drawbacks noted during anesthesia were occasional pallor and tendency to syncope, easily treated by stimulants, and after the anesthetic effects of the drug had passed off there were sometimes headache and backache of no great severity. In a few instances a trace of albumin appeared in the urine, owing apparently to some toxic action of tropacocaine on protoplasm, but no lasting ill effects on the kidneys were seen. In this series of cases no death directly attributable to the anesthetic occurred, the only fatality in which possible blame might have been attached to the drug being in an exhausted patient the subject of old calculus pyelitis, in whom a general anesthetic would have been inadmissible, and who died after being taken back to bed, 50 minutes after the injection. In two cases, both subjects of jaundice, temporary respiratory failure occurred on the operating table, but passed off under the usual measures of treatment. Satisfactory anesthesia is obtained by spinal injections over all the region below the diaphragm. It is not advisable to attempt to obtain a higher distribution by making the injection high up in the cord, as some risk is thus probably run. Cases especially suitable for this form of anesthesia are those in which there is respiratory trouble, such as bronchitis, or some grave condition of toxemia, such as uremia or diabeies. Cardiac cases and chronic alcoholic subjects are also better treated by injection than by a respiratory anesthetic, and emergency operations may be done by this means on persons who have recently taken food. A few days in bed should be enjoined after the procedure, which is therefore unsuitable for ambulatory use, and it may be barred by local septic troubles in the neighborhood of the seat of injection or by disease of the central nervous system. In some cases it is well to administer a small dose of morphine or some similar drug previously, or a general anesthetic may be combined with the spinal injection, being given either before or after the latter; for example, in the few cases in which for any reason the local anesthetic fails to act. The author emphasizes the value of the method as facilitating the work of the surgeon in the absence of a qualified anesthetist, and holds that it should be taught in all medical schools as an alternative to the usual methods.—Birmingham (England) Medical Review.

Gold-Potassium Cyanide in Syphilis.

Grunberg has tried the new preparation, gold and potassium cyanide, recommended for syphilis, and reports as follows: A 1 per cent. stock solution was diluted with 50 c.c. freshly distilled water, as many c.c. being used as it was desired to inject centigrams. The initial dose was 0.01 which was carefully increased up to 0.03-0.05. The drug was injected in this way intravenously every third or fourth day. The total amount injected was 0.19 to 0.21. Local irritation or after-effects were not seen except slight intestinal disturbances. An undoubted impression was made upon the disease, particularly in case of the primary sore or gummata so that the drug must be regarded as a valuable adjuvant in the treatment of syphilis. L. Hauck has also tested the drug very carefully, particularly in lupus, and has also seen excellent results. Inasmuch, however, as he has seen one fatal intoxication, he warns against the use of doses commonly recommended. Even doses of 0.02 Gm. act as blood-poison and cause destruction of both red and white cells. The case meutioned had received 0.34 Gm. within 33

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days, in 10 intravenous doses, varying between 0.02 and 0.04 Gm. each. On the day before death, the hemaglobin was 55 per cent., the reds 3,330,000 and the whites 950 and a hemolytic jaundice was very evident. The author thinks it is doubtful if doses small enough to be safe will be therapeutically sufficiently active, unless combined with tuberculin.—Muench. Med. Woch.

Sodoxylin, and Other Things.

I hope "you all" will sit up and listen while I report some results obtained with Sodoxylin.

Case 1.—Young woman; her first child five months old. She had suffered intensely during the latter months of pregnancy from pruritus vulvæ. Three weeks before she came to me, she had a severe chill, followed by a few days of fever, pronounced possibly typhoid.

When I saw her first her skin was so dark I suspected Addison's disease. She was inclined to be melancholy and dull. There was no temperature, she was not constipated, her appetite was good, and her tongue clean but flabby. Pulse soft. She complained of intense itching all over the body. No eruption or redness at any time. Her husband said she slept in the refrigerator with a whiskbroom in one hand and a curry comb in the other, since she was much worse at night!

This woman has been taking calomel and a tonic. Examination of the urine showed acidity of 90 degrees, a small amount of indican, and deficiency in solids. Her one plea was: "Relieve this itching or I'll go mad."

This was Thursday afternoon. I prescribed Sodoxylin, two teaspoonfuls to be given in hot water every four hours the first day; then four times the second day; then before meals. She was asked to report the next day with a sample of twenty-four hours' urine.

The following the day the urine had an acidity of 60 degrees, and there was no indican. Solids slightly increased. She had slept all of Sunday night.

I ordered Sodoxylin kept up before meals, and gave podophylin, irisoid and other vegetable liver stimulants. As a tonic, Phillips' phosphomuriate of quinine compound was prescribed. (She objected to pills or I would have given her Triple Arsenates with Nuclein). I also cut down the amount of starch and sugar in her diet and insisted upon her taking plenty of fresh fruits and vegetables.

In ten days the woman came in again. Her urine was normal, and her bright, fresh skin and sparkling eyes testified that she "felt fine."

Case 2.—A womany of thirty. Subject to severe headaches, with vomiting, and she usually "felt awful." Urinary acidity 80 degrees. Considerable indican. She was badly constipated. Skin dry and scaly. Had been taking calomel two or three times a month. I put her on phenobilin first, then on Bilein and Pancreatin Compound (A. A. Co.). Later I added Sodoxylin and now she reports no headache or vomiting for weeks, something she has not been free from for six years.

Case 3.—A woman of sixty. Badly constipated, and takes four compound cathartic pills about four times a week. Severe and frequent headaches. She promised to try Sodoxylin to "please" me.

Result.—She has taken four bottles, with diminishing headaches and skin clearing up in a remarkable way. Constipation much relieved.

What success have the "family" had with cretaegus? In every case where I have tried it, strangury has followed, resembling that produced by cantharides. The ages of my patients va ied from seven to forty, and the dose from minimum to maximum.

Can anyone report on pituitrin, in slow labor? My results have been disappoint-

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ing, the increased force being of such short duration. What dose might I give?

I believe good drugs properly used are worthy of our confidence, but often we are not well enough acquainted with them to appreciate their true value.—J. F. Shane, M.D., Steubenville, Ohio.

Analysis of One Hundred Consecutive Cases of Pneumonia.

Under 20 years there were 22 cases and no deaths. Under 40 there were 67 cases, with 8 deaths; average mortality, 11.94 per cent. After 40 the mortality rose rapidly. The mortality was identical in the two sexes. The influence of occupation on the attack-rate and the mortality is not noteworthy. There was a definite history of alcoholic excess in 17 cases—all males—of whom 4 died, 3 of these being over 40 years of age. In 13 cases there was a history of previous attacks, varying in time from 30 years to three months before admission. Of these only two died. One patient who had had two previous attacks recovered. Only six patients attributed their attack to a wetting. Twelve patients had a definite history of tubercle, and of these only one died. The absence of a history of influenza is noteworthy. Forty-seven patients gave a history of one severe, prolonged rigor. One patient had two rigors. One patient had three rigors. One patient had several rigors. One patient had "shivered for six hours." One patient had "shivered for three days." Forty-eight cases gave no history of rigor. Early prostration was marked in nearly every case. Only two patients remained at work after the initial rigor.

Most patients presented a typical pneumonic syndrome, but five patients were admitted as "abdominals"—namely, three as "colic;" one as enteric fever; one as subphrenic abscess. All these patients recovered. Seventeen had albuminuria in considerable amount: of these six died—mortality, 35.3 per cent. Seven had valvular disease of the heart; of these only one died—mortality, 14.3 per cent. Three had marked delirium; all died. One had practically no symptoms. The most noteworthy feature was the high mortality in cases in which the maximum temperature ranged from 101 to 402° F. The analysis emphasizes the deadliness of double pneumonia. It shows a heavier mortality in right than in left pneumonia. No case of abscess of the lung was recorded. One patient developed aortic reflex during the attack. No clear case of malignant endocarditis occurred in the series, though its presence was more than once suspected. No patient, not previously tuberculous, developed phthisis as the result of his illness. Pleurisy was only noted as a complication where it was a prominent feature. No case of meningitis occurred. A termination by lysis was recorded in 34 per cent. of cases. The pneumococcus was found to be practically constant in the sputum. The attack-rate was much higher in the months of November to May than in the months of May to November. The mortality shows some curious fluctuations in the monthly average, but is, on the whole, higher in the months of greater prevalence of the disease. In six years out of fifteen the mortality was nil, while in seven years it was over 30 per cent. The general mortality was 20 per cent., or, omitting two cases which were moribund on admission, 18 per cent.

Lindsay treats pneumonia as an acute general infection, with special impact on the lungs, inducing a very intense type of toxemia and involving special danger from the side of the heart. Everything that tends to conserve the patient's strength and remove sources of irritation receives attention. Only milk is allowed—three pints in the 24 hours—any excess of nourishment being regarded as likely to remain unabsorbed, and to distend the stomach and embarrass the heart. A light warm poultice, frequently renewed, is applied to the chest, care being taken not to embarrass the respiratory movements, and after the third or fourth day this is replaced by a jacket of cotton-wool. In the hope of diminishing the toxemia the skin, bowels and kidneys are gently stimulated, all remedies which might tend to depress the heart being avoided. If the patient is in great pain or very restless a hypodermic of morphine or a few grains of Dover's powder are administered. In the presence of any signs of circulatory weakness strychnine is given hypodermically, and ammonia and digitalis and sometimes caffein by the mouth. Alcohol is used sparingly, and only in the more serious cases and in moderate or small quantity. Of the 100 cases only thirty-nine received any alcohol. Brandy was the usual stimulant, and the amount seldom exceeded 3 or 4 ounces. In the presence of unusual dyspdea or cyanosis, oxygen was administered, the gas being passed through alcohol. Tepid sponging was vigorously practiced in every case, and cold sponging when the indications seemed to point to its use. Antipyretics or expectorant drugs were not administered. Bleeding was not employed in any of this series of cases. The various complications, when they arise, were treated on the usual lines.—Lindsay, British Medical Journal.

The Intravenous Injection of Diphtheria Antitoxin.—Beyer (Munchener Med. Wochenschrift) found that in cases in which the injections were made on the second day of the illness the average of defervescence was in favor of the intravenous treatment (the standard of defervescence being the day on which the temperature was definitely normal). Five intravenous cases showed normal temperature on the first day after injection as against none of the subcutaneous ones. Taking the first two days together, eleven intravenous and but five subcutaneous ones yielded to treatment. As the days increase the conditions are reversed, and on the third day favorable results were noted in only three of the intravenous and in six of the subcutaneous cases. On and after the fourth day all of the intravenous cases gave normal temperatures, but not all of the subcutaneous ones. A similar inference may be drawn from the tables of the third day on 22 cases, while no conclusions can be derived from the figures for the fourth day. This may be due to the fact that as the disease progresses the influence of the specific treatment is less palpable.

While the rise and fall of the fever with the subjective sensation of indisposition of the patient may be regarded as an objective indication of poisoning or its removal, respectively, the conditions with regard to the local course of the disease are somewhat different. The wide-spread affection of the thorax is of itself not serious as long as the poisonous products of the diseased area are neutralized. This depends entirely upon whether there is a more or less clean infection, whether the picture is merely one of a fibrinous exudation, or whether there is a greasy coating due to a mixed infection or to a particular reaction of the tissues. The toxin must be regarded as a substance which separates the diphtheria bacilli in order to produce that condition of the tissues (inflammation and necrosis) most favorable for their unlimited increase. The presence of sufficient antitoxic substances prevents the development of the disease; at the utmost the bacilli are present as parasites on the membranes. This explains those cases of healthy bacillus carriers in which no previous illness has been demonstrated.

In passing it may be said that these two factors—the presence of the bacilli and the lack of protective material—do not represent the onset of the disease in all cases. A third factor enters into consideration, and the want of protective material against this leads to toxic changes in the tissues at the seat of the invasion of the bacilli. It is also clear that the toxins are most concentrated in the region of the diseased area—the edematous inflamed membranes. It is easily demonstrated in animals that the edema which forms after the injection of diphtheria bacilli contains diphtheria antitoxin, while no reaction is obtained with the blood serum. We, therefore, have to differentiate between three toxic zones in the organism—the diseased area with its high toxic content, the tissues of the toxic-sensitive organ, and the non-toxic sensitive tissues together with the blood and the lymph. The toxic substances circulating freely, for the time being, are relatively insignificant since the poison does not collect in the blood but quickly flows to the tissue cells. A very small amount of antitoxin will, therefore, satisfy these free toxins as well as those of the loosely woven tissues, although it is well to make a high estimate of the antitoxin content of the blood in order the more readily to set it free. The diseased area naturally requires the greatest amount of antitoxin, and the separated toxins from this should be constantly intercepted as they are thrown off in order to prevent their spread. Prompt neutralization reduces the inflammatory irritation, and the tissues sooner or later are sure to regain their normal aspect. The bulk of the bacilli are removed with the casting off of the necrotic tissues. It is noteworthy

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that even with a very energetic antitoxin treatment the swelling does not subside as rapidly as, for example, do syphilitic papules after an injection of salvarsan. This may be explained by the fact that in the latter case the excitants themselves are destroyed, while in diphtheria their metabolic products are attacked and the reaction follows rather slowly on the one hand, and, on the other, continually produces new toxins.

Furthermore, according to the most recent investigations of v. Behring, it seems as if an equilibrated mixture of toxin and antitoxin still possesses some toxic reaction; this possibility may also enter as a factor in the localized reaction in the diseased area. Therefore it need not necessarily follow that an apparently slight influence on the diseased area indicates a lack of neutralization of the toxin and insufficient treatment.

In experiments on an equal number of intravenous and subcutaneous injections the figures were again in favor of the intravenous treatment. In the greater number the shedding of the mebrane and the shriveling of the ulcers took place within four days after treatment. Within the first two days after treatment the pharynx was clear in five of the intravenous and in only two of the subcutaneous ones. Taking the first three days together the figures are 13 and 7 respectively, while the fourth day the conditions are reversed. It must be remarked, however, that intravenous cases were frequently seen in which the day after the injection the swelling of the pharynx increased visibly and the coating spread superficially toward the soft palate. In several cases, nevertheless, the temperature was lowered. On the whole the impression was gained that, as far as the effect on the pharynx is concerned, the two methods do not greatly differ. The dose employed cannot be said to have been too small, as authors (cf. Fette) employing larger doses have come to a similar conclusion.

In agreement with other authors no ill effects on the kidneys were noticed by the small amount of carbolic acid used.

In two cases a violent urticaria was noticed a short time after the intravenous injection. This spread rapidly from the elbow, the point of puncture, over the entire body, but disappeared as suddenly as it came. The point of exit of the exanthema is worthy of note. Fette also remarked this. Considering the rapid course of the antitoxin serum through the circulation it does not appear clear why the vein at the point of injection should at the same time be the point of exit of the rash. Perhaps a trace of the serum is left behind at this point as the needle is inserted and withdrawn.

Foci of Incipient Tuberculosis.

In adults the existence of an incipient pulmonary tuberculosis can be demonstrated easily by careful percussion (provided that during the examination of the front of the chest the patient is in the recumbent position with relaxed muscles) long before any bacteriologic evidence is obtainable, and while the auscultatory evidence is insufficient for a diagnosis. In the upper lobe of each lung a focus of incipient pulmonary tuberculosis can be detected by careful percussion in the inner part of the first and second intercostal space in front, and in the inner part of the suprascapular space. A second focus can be detected in the outer part of the first and second intercostal spaces in front, and in the outer part of the suprascapular space. A third focus can be detected in the upper part of the lower lobe on each side by careful percussion at the posterior end of the scapular spine. These six dull areas are present in all cases of early pulmonary tuberculosis. I belteve that they are not produced by any other morbid condition, and that they are sufficient for the diagnosis of a (past or present) tuberculous infection. Whether infection is active or quiescent must be determined by the symytoms or auscultatory signs. In addition to these six apical areas, many other small dull areas can be found in the lungs in cases of early pulmonary tuberculosis. The position of these areas is practically invariable; they are nearly symmetrical in the two lungs, but show certain differences, which evidently result from the existenee of three lobes in the right lung and of only two in the left.—Lees, Brit. Jour. Child. Dis.

The Cerebrospinal Fluid in Infantile Tremor.

Mariano Lo Re notes that Durante characterized this tremor as an atypical form of tetany. Rotch and Holt attribute it to a nutritional defect. In three cases studied by the author the cerebrospinal fluid showed a slight increase in the amount of albumin and a moderate lymphocytosis. These changes he regards as evidence of a mild meningeal reaction resulting from intestinal toxemia.—La Rifofma Medica.

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Three Successful Operations for Perforative Typhoid Ulcer.—Mitchell in the British Medical Journal, thinks he may fairly emphasize the following points:

1. The modern system of treating typhoid in well-equipped hospitals, where such a complication as perforation is likely to be recognized at the earliest possible moment, and immediately arrangements made for operation, is eminently favorable to surgical success.

2. It is very desirable to operate as rapidly as possible, and to avoid all unnecessary handling and exposure of intestine. These patients are totally unable to bear much manipulation.

3. The quickest way to find the perforation is to go straight for the ileocecal valve and trace the ileum upward. It will rarely be necessary to handle more than 2 to 3 feet of bowel.

4. All sutures should be of catgut, as silk or linen is almost certain to become infected and give rise to troublesome sinus. The catgut the author uses is prepared by boiling in absolute alcohol for thirty minutes, and stored in tincture of iodine one part, proof spirit ten parts.

5. These patients bear the Fowler position and continuous rectal saline quite well.

6. Coliuria being a very likely complication, it appears wise to put these patients at once on alkaline treatment. Whether as a result of this procedure or not, his last two cases showed no sign of this troublesome ailment.

Santonin Poisoning.

Dollner (Zeitschr. f. Medizinalbeamte) records an instance in which an infant two months olds received by mistake six tablets of santonin instead of saccharin. The total quantity of santonin swallowed was a little over two grains. The usual symptoms affecting the central nervous system appeared, and death occurred on the eighth day. No special post-mortem appearances were present, and a week later the organs wera submitted to chemical analysis. Notwithstanding the fact that the infant lived for eight days and that the organs were in on advanced state of putrefaction, the presence of santonin was detected in the urine, kidneys, and in the intestinal contents. The conclusions of the author are, that the poison requires a long time for excretion; that it is very resistant to putrefaction; that the alkaline-alcohol test is unreliable, and that the test with sulphuric acid and chloride of iron requires the application of considerable heat, and finally that the sale of santonin should be officially restricted.—Edinburgh Medical Journal.

Plague in Havana.

Because of the discovery of a case of supposed bubonic plague in Havana on March 6, the departure of all vessels from the port was prevented by the Marine Hospital Service. It is reported that plague is prevalent in all the ports of Ecuador, and that a number of deaths have occurred.

Case of Friedreich's Disease.

Taylor reports the case of a man, aged 42, who had an unsteady gait for five years; no pains. Upper limbs not so accurate as formerly. No sphincter trouble; no ocular trouble. Articulation peculiar Wiltshire accent. No ataxia; no scoliosis; no foot deformity; no anesthesia. Knee jerks present, not so active as normally, but more active than on admission; extensor responses from both soles.—Proceedings of the Royal Society of Medicine.

Blaxland and Claridge (British Medical Journal) report seven cases of acute pancreatitis with seven deaths, five of which were operated. The main symptoms in all cases were acute abdominal pain coming on suddenly. In some cases there was a history of previous attacks of indigestion; tender, distended and painful abdomen; vomiting and collapse. All of them either at the time of operation or at the post-mortem examination showed evidence of fat necrosis and all cases at operation exhibited more or less dirty, reddish fluid in the pelvis which the authors consider to be diagnostic. In five cases gallstones were found in the common duct; in one case the gallbladder was firmly adherent to the small intestine; in one both ducts and bladder were apparently normal.

In discussing the pathology they are agreed that the infection comes from the duodenum owing to the loss of the integrity of the valve of Vater, permitting the flora of the bowel to pass along the pancreatic duct to the gland proper. The writer wonld also point out the similarity of the onset of acute pancreatitis and perforating gastric or duodenal ulcer. He can also vouch for the common association of this and chronic pancreatitis with gallstones lodging in the common duct. In the chronic form at operation he has noticed how hard and indurated the gland feels—almost suggesting a malignancy—but, strange to say, at the autopsies the gland, although enlarged, has lost its induration; most likely the latter condition duridg life is due to active hyperæmia in a dense capsule.

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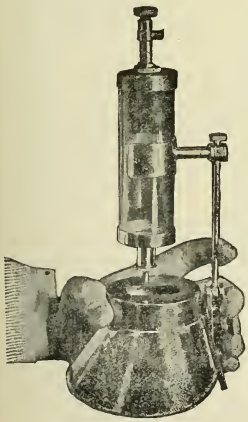

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Table of Contents for April, 1914.

Original Communications.

The Association of Some Forms of Mental Disease and Inebriety, by W. C. Ashworth, M.D., Greensboro, N. C., ... 217
Modern View of Cause and Treatment of Diabetes, by C. W. Canan, M.D., Orkney Springs, Va., ... 221
Exploratory Surgery for Diagnostic, Prophylactic and Curative Purposes in Occult Intra-Abdominal Conditions, by Stephen Harnsberger, M.D., Catlett, Va., ... 223
Morphine—The Brain, by J. W. Williams, M.D., Richmond, Va., ... 226

Editorial.

"The Physician a Benefactor," ... 229
The Milk Supply of India, 230
Dr. L. B. McBrayer, of Asheville, becomes Director of the N. C. State Sanitarium for Tuberculosis, ... 230
Wood Alcohol, ... 231
Tuberculosis in India, ... 231
Health in the Canal Zone, 231
Infantile Mortality in India, 231
Editorial News Items, ... 232

Book Notices.

A Treatise on Diseases of the Skin, by Henry W. Stelwagon, M.D., ... 236
Manual of Obstetrics, by John Osborn Polak, M.D., 236
Pathogenesis of Salvarsan Fatalities by Sanitats-Rat, by Dr. Wilhelm Wechselmann, ... 237
Irritability, by Max Verworn, M.D., ... 237
International Clinics, ... 237
Progressive Medicine, ... 237
State Board Questions and Answers, by R. Max Goepp, M.C., ... 238
A Synopsis of Medical Treatment, by George Cheever Shattuck, M.D., ... 238
Infection and Immunity, by Charles E. Simon, M.D., 238
Anatomy and Physiology for Nurses, by Amy E. Pope, 238
Medical Gynecology, by S. Wyllis Bandler, M.D., ... 238
The Practice of Peniatrics, by Charles Gilmore Kerley, M.D., ... 239

Abstracts.

The Etiology of Syphilitic Hemiplegia, ... 240
The Use of Radium in Malignant Disease, ... 241
Observations on the Surgery of the Spleen, ... 241
What the General Practitioner Should Know About Gonorrheal Iritis, ... 242
The Diagnosis and Treatment of Granular Kidney 243
Pellagra-Like Skin Lesions in Australia, ... 244
Glycogen Content of Mucous Membrane of Fallopian Tube, ... 244
The Umbilical Lung, ... 244
Hyperthermic Treatment of Gonorrhea, ... 245
Prognosis and Treatment of Tetanus, ... 245
Hyoscine-morphine and Pituitrin in Parturition, ... 245
Transplantation of the Ovary in the Human Being with a Record of Three Cases, ... 245
Case of Ovarian Pregnancy with Full Time Fetus, ... 245
Features of Renal Tuberculosis, ... 246
Drug Treatment of Enuresis 246
Small Enemata, ... 246
Infantile Type of Uterus with Dysmenorrhea, ... 247
The Treatment of Pleurisy in Children, ... 247
Quincke's Disease, ... 248
Treatment of Hematogenous Infections of the Urinary Tract, ... 248
Fatal Hemorrhage from the Throat, ... 248
Fracture of the Femoral Neck in Children, ... 249
Syphilis of the Heart, ... 249
Ante-Mortem Thrombosis in Pneumonia, ... 249
Magnesium Treatment of Spasmophile Convulsions 249
Fatal Cases of Eczema in Children, ... 250
Hereditary Congenital Torticollis, ... 250
Summer Diarrhea of Children, ... 250
Spasmodic Heredo-Syphilitic Parapiegia in Children, ... 251
Treatment of Bedsores, ... 251
Treatment of Night Terrors. 251
Operative Treatment of Fractures, ... 252
Radical Cure of Procidentia Uteri, ... 253
Scarlatinal Measles, ... 254
Petrolatum as a Substitute for Beck's Paste in Treating Fistula, ... 254
New Treatment for Ringworm, ... 254
Petrol as a Therapeutic Agent, ... 255
The Administratioe of Neosalvarsan, ... 255
Incontinence of Uiine in Children, ... 255
Pulmonary Tuberculosis, ... 255
Pneumonia, ... 256
The Treatment of Dysentery, ... 256
Cyclic Vomitina in Children, ... 258
Roentgen Therapy of Tuberculous Lymphatic Glands, ... 258
Duodenal Ulcer, ... 258
The Organic Theory of Chorea, ... 259
Use of Aromatic Arsenic Preparations by Rectum in Infants, ... 259
Errors in the Diagnosis and Treatment of Diseases of the Joints, ... 259
New Method of Treating Chronic Colicystitis and Other Bacterial Infections 260
The Mauner of Mercury's Action, ... 260
Cystitis in the Female, ... 261
Acute Intestinal Obstruction Due to Volvulus of the Cecum, ... 261
Parasyphilis, ... 262
Torn Semilunar Cartilages, 263
Murder by Drowning, ... 263

Fistula in Ano.

When much pus is being discharged, or a large abscess is present, an operation for fistula in ano should not be performed. The proper treatment is to insure free drainage, if necessary by enlarging the existing openings for the purpose, and to have the tracks and pockets frequently irrigated with hydrogen peroxide, or some other suitable antiseptic solution. Frequent fomentations and hot baths will also assist. All this saves time in the end, as it much reduces the size of the wound required at operation.—Mummery, in The London Lancet.

A Case of Mesenteric Cyst Simulating an Intussusception.

Turner and Tipping report the case of a male infant aged four modths who was admitted to Guy's Hospital for passage of blood from the anus. Until a week before admission the child had been perfectly well, but during this week he had been slightly irritable, had not been sleeping as well as usual, and han had several "crying fits." On the morning of admission he did not have a good stool. In the evening blood was passsd and he was taken to the hospital. On admission the child did not appear to be in pain, and nothing could be felt on abdominal palpation; a rectal examination, however, showed the presence of recent blood. An anesthetic was given and then a small movable lump was felt just below and to the right of the umbilicus. A diagnosis of intussusception was made and the abdomen was at once opened. The lump was found to be a tense cyst, about one inch in diameter, situated in the mesentery in the angle between the ileum and the colon. It bulged into both these portions of the intestine, causing obstruction at the ileo-cecal valve. An attempt was made to remove the cyst, but though it was easily separated from the mesentery its walls appeared to be absolutelv incorporated with the wall of the ileum and cecum. As it seemed certain that any further attempt at removal would result in damage to the bowel, the cyst was incised and a quantity of white, odorless, glairy fluid was evacuated. There was no communication between the cavity of the cyst and the bowel. The greater part of the cyst wall was cut away and the edges were then sewn to the parietal peritoneum. The cavity was drained and the rest of the wound closed. The first stool after the operation contained blood, but afterward the bowels acted regularly and the stools were normal. Mucoid material discharged from the wound for some time, but this eventually healed. Since then, on two occasions, incisions were required to allow of the escape of mucoid material. A section of the cyst wall showed a structure closely resembling small intestine.—Proceedings of the Royal Society of Medicine.

Pneumococcal Infection of the Pharynx and Larynx.

Turner and Mollison report the case of a man aged 23, who was admitted to Guy's Hospital in April last, on account of tenseness and a brawny swelling in the right submaxillary region; this was incised under an anesthetic. During the course of the operation the patient developed so much dyspnea as to necessitate a laryngotomy; the tube was removed in a day or two and the patient made a fair recovery, though he had all the time some swelling about the pharynx and tonsils. In July the patient was readmitted with increasing dyspnea. Tracheotomy had to be performed and ever since the tube has been worn. Examination of the larynx before readmission had shown edema of the epiglottis and arytenoid regions. In August a further examination of the patient was made under an anesthetic; it was found that the soft palate and uvula were edematous and the tonsils large and ragged. The right tonsil contained a cavity into which the tip of the finger could be introduced; it was enucleated, and on bacteriological examination a pure culture of pneumococcus was obtained. The edematous epiglottis was punctured and cultures taken from the serum were obtained; these cultures showed the pneumococcus and the Bacillus catarrhalis. The patient still has much swelling about the upper aperture of the larynx, and is unable to dispense with the tracheotomy tube. The temperature has varied from 99° to 97° F., except for two days following the tracheotomy. Two weeks previously the patient had a quinsy on the left side.—Proceedings of the Royal Society of Medicine.

Intravenous Injections of Human Blood in Anemias.

Weber advises the intravenous injection of 5 c.c. of defibrinated human blood for the treatment of cases of severe anemias. His forty-six injections were followed by only slight reactions. The technique is much simpler than that for direct transfusion and he believes the beneficial effects are due to a stimulating action on the blood forming organs. Diet, hygienic measures and arsenic must be employed to aid the injections. Weber found small amounts of blood were more efficacious than larger quantities.—Munch. med. Woch.

Massive Coagulations of the Cerebrospinal Fluid.

Debre and Paraf allude to the rarity of this condition, twenty instances of which have been reported. They report the case of a girl aged 14 years suffering from tuberculous meningitis. The cerebrospinal fluid removed by lumbar puncture completely clotted in a few minutes. The authors point out that in the majority of cases in which the cerebrospinal fluid behaves in this manner, the patients present the symptoms of meningomyelitis or of spinal compression with paraplegia.—La Presse Medicale.

Salvarsan—Neosalvarsan

AMPHOTROPIN

HEXAMETHYLENAMINE CAMPHORATE

Is a well tolerated urinary antiseptic. It is indicated in CHRONIC and SUB-ACUTE CYSTITIS, PYELITIS, NON-TUBERCULAR PYELO-NEPHRITIS, and BACTERIURIA.

Dose: 1 tablet three times a day.

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The ideal laxative or purgative is one that will produce as near physiological evacuation of the bowels as is possible without exciting excessive peristalsis. Such a laxative will accomplish its results in a natural manner without upsetting the digestive functions, causing griping or pain, or inducing reactionary constipation. That the medical profession have in Prunoids a laxative that presents these qualifications to a superlative degree is evident to the thousands of physicians who are using it day in and eay out. They have found that Prunoids can be relied upon to stimulate normal secretion, increase the fluid content of the feces when deficient, and thereby bring about free and thorough elimination without irritation of the intestinal mucosa.

Hence it is that Prunoids have proven so valuoble in treating the constipation or bowel torpor encountered in such diseases as neurasthenia, jaundice, anæmia, rheumatism, gout, and all other affectisns where tonic stimulation of the functional activity of the bowels is so essential. Indeed, Prunoids exert so pronounced an influence on the physiologic processes of the intestines that the effects are often prolonged for several days. Thus Prunoids do not induce the cathartic habit, as do so many other laxatives, but can be relied upon to accomplish results that rarely fail to persist for a long and gratifying period. Because of this very marked corrective action on the physiologic processes of the bowels, Prunoids have no superior as a remedy for the systematic treatment of chronic constipation of functional origin. It is no exaggeration to state, therefore, that no other remedy thus far offered for laxative or cathartic purposes produces more prompt, positive and permanent effects with such gratifying freedom from unpleasant or objectionable sequelæ.

"Elixir Saloform Comp., Flexner." Contains 20% Alcohol. An efficient remedy for Rheumatism, Gout, Cystitis and Uric Acid Solvent. Prepared for physicians' prescriptions only. Robinson-Pettet Co., incorporated. (See page xiv this issue.)

Whooping-Cough (Pertussis).

Cause.—Whooping-cough, or pertussis, is due to bacterial infeciion. The whooping-cough germ is named the Bordet-Gengou Bacillus after its discoverers, Dr. Jules Bordet* and Dr. Octave Gengou.† This bacillus finds its way into the trachea and bronchi and is caught by the cilia (minute hair-like structures lining the entire respiratory tract, which constantly wave to and fro, and the purpose of which is to catch and brush out foreign particles of all kinds). The whooping-cough bacillus once located between the cilia, multiplies rapidly and soon is present in such large quantities that normal motion of the cilia is interfered with and irritation is produced, which results in the well-known spasmodic cough and whoop. The cilia being unable to perform their usual functions, foreign particles and bacteria readily find their way into the bronchi and lungs, to which fact is due the frequent development of pneumonia in whooping-cough patients. Besides the pneumococcus, the influenza bacillus, the streptococcus, staphylococcus and members of the Micrococcus catarrhalis group may find their way into the bronchi and lungs from the throat and nasal passages. The ready access of these bacteria to the respiratory tract on account of the inactivity of the cilia frequently results in a serious mixed infection.

Mode of Recovery.--The whooping-cough bacillus rarely remains long on the respiratory mucous membrane, but when it has disappeared the trouble is kept up by the other microorganisms mentioned above for which it has provided a foothold. Recovery from whooping-cough, therefore, must in every case be produced by Nature in the following manner: First, antibodies are formed against the whooping-cough bacillus, and as the other bacteria make their separate or combined attacks, corresponding antibodies are produced, and they are also destroyed. This procedure, however, consumes a great deal of time, so that an untreated case of whooping cough will frequently persist for months.

Knowledge of the causative and complicating agents leads of course to the proper treatment with bacterins. It is not sufficient to employ a bacterin containing the whooping cough bacillus alone, as the elimination of this factor would have no effect on the other bacteria present. The best results are to be secured by using a bacterin containing not only the whooping-cough bacillus, but the pneumococcus, influenza bacillus, streptococcus, staphylococcus, and members of the Micrococcus catarrhalis group, or in other words, a vaccine corresponding to the various microorganisms which combine to produce the disease. Pertussis Bacterin Mixed Mulford contains the microorganisms referred to, killed and suspended in sterile physiological saline solution, and suitably graduated in regard to strength. It is supplied as follows:

PERTUSSIS BACTERIN MIXED MULFORD (Pertussis Vaccine Mixed):

Indications: For the treatment of whooping-cough and immunizing against the disease.

	A	B	C	D
Each syringe contains				
Bordet-Gengou Bacillus	25	50	100	200 million
B. influenza.....	12.5	25	50	100 million
Staphylococcus aureus..	25	50	100	200 million
Staphylococcus albus..	25	50	100	200 million
Streptococcus...	12.5	25	50	100 million
Pneumococcus.....	12.5	25	50	100 million
M. catarrhalis.....	12.5	25	50	100 million

Dosage.—The usual initial dose of Pertussis Bacterin Mixed Mulford, is the contents of Syringe A, reduced of course to 1-5 to 2-5 of Syringe A, for very small children. It should be given hypodermically every three or four days; in infants from the beginning, in older children at the height of the disease.

CLINICAL REPORTS (Quotations from Recent Articles).

John Zahorsky, M.D., (1) of St. Louis, Professor of Pediatrics, St. Louis University School of Medicine, treated 40 cases, and says regarding the effects of Pertussis Bacterin:

"When a hypodermic injection of 20 million bacteria is administered, no general reaction is observed. In several cases, in which temperature determinations were made, no elevation beyond that usually found in pertussis could be discovered. No local irritation occurred in any of the writer's cases. The pain from the injection is trifling. A few hours afterwards the cough seems to become worse, and this period (negative phase) extends over 24

*Bordet is pronounced Bor-day. Dr Jules Bordet is Professor of Bacteriology in the University of Brussels, and Director of the Pasteur Institute of Brobantr

†Gengou is pronounced Gau-goo. Dr. Octave Gengou is one of the Medical Faculty of the University of Brussels.

Note.—Bordet and Gengou originated (or were the first to employ) the complement fixation test for diagnostic purposes. The Wassermann test for syphilis, the complement fixation test for gonorrhea, etc., are adaptations of the original Bordet-Gengou complement fixation test. (These tests will form the text of subsequent papers).

hours with a moderate dose (30 million), but may extend over two or three days after a large dose (100 million). After this period of aggravation of the symptoms, a period of two to four days follows in which a great improvement is observed. Often this improvement is so striking as to be readily noticed. Such expressions as 'he slept all night,' 'the first night that I have had a rest,' 'only had one attack,' 'had several attacks but they were so mild that he did not wake up,' were given by the mothers in fully one-half of the cases. Sometimes the effect is really remarkable." His conclusion is as follows: "Pertussis bacterin in doses of 30 to 50 million is a very helpful therapeutic resource."

Edwin E. Graham, A.B., M.D.,(2) Professor of Diseases of Children, Jefferson Medical College, Philadelphia, gives the following results and conclusions: "Of the twenty-four reported cases, seven were apparently not benefited by the treatment, the disease evidently pursuing its usual course in about 29 per cent. Seventeen patients, or about 71 per cent., were apparently benefited by the treatment. I believe the dose could and should be increased beyond 40 million, especially for severe cases; 60, 80 or 100 million will probably be a more efficient dose. The results obtained in these twenty four cases warrant, in my opinion, a more extensive trial of the vaccine."

R. W. Allen, M.D., B.S.,(3) London, has recently reviewed the subject of bacterins in whooping-cough. He says, "by the end of the first week the Bordet bacillus has almost disappeared from the secretions, whereas the B. influenzae and pneumococcus, and perhaps the streptococcus and M. catarrhalis have increased considerably in number. A pure infection is so rare that the symptoms referable to the Bordet bacillus alone may be almost said to be unknown.

Freeman(4) gives a detailed account of the many careful observations which he made in order to determine the correct therapeutic dose. Doses varying from 2 to 120 millions were employed, the final conclusions being that a dosage of about 100 millions gives the best results, and that a weekly reputation is quite safe. By these means he found that the average duration of the disease in his vaccinated cases was reduced to 4.3 weeks as compared with 7.4 weeks in those who received inoculations of saline solution and served as controlsr

"Reinoculation may be performed at intervals of from five to seven days, and at the third inoculation a double dosage may be employed if thought advisable."

"As a prophylactic the initial dosage corresponding to the age may be doubled in seven days; and this again doubled if thought advisable after another seven days."

"The employment of the above combined vaccine for this purpose may also be expected to diminish the liability to broncho-pneumonia, and is devoid of all risk."

"As to the duration of the immunity thereby conferred we as yet know nothing; probably it is about six months, so that two series of inoculations yearly may suffice to confer the desired protection."

Saunders(5) and collaborators treated 40 cases of whooping-cough and immunized 14 children exposed to contagion. Their conclusions regarding the value of pertussis bacterin are as follows:

"1. That as a prophylactic the vaccine has a decided value; whilst it is true that vaccination or some other infection will postpone or interrupt the course of pertussis, (pertussis) vaccine alone will absolutely prevent it. The immunity is of uncertain duration, but the injections may be repeated and it is of the utmost importance to postpone the disease until the child has passed the age of twelve. The failures reported by some observers must be attributed to an impotent vaccine or to insufficient dosage."

"2. That as a remedial agent success depends upon the promptness of administration and the freedom from complications at the time."

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"3. In no case should other treatment be withheld if indicated, especially in infants, who may be spared convulsions or bronchopneumonia by the use of emetics, sedatives, or some aromatic compound."

"4. It is quite possible that much better results may be obtained in late cases by the use of larger doses and the combination of vaccine directed against the allied organisms."

(1) Zahorsky, John, "The Bacterin Treatment of Pertussis," Interstate Med. Jour., October 1912, pp. 844 855.
(2) Graham, Edwin E., "The Treatment of Pertussis with Vaccine," American Journal of Diseases of Children, Jan., 1912, pp. 41-49.
(3) Allen, R. W., "Vaccines in Whooping-Cough," Journal of Vaccine Therapy, Sept., 1912, pp. 255 257.
(4) Freeman, Proceeding Royal Society of Medicine, Vol. III, No. 9, p. 97.
(5) Saunders, Pediatrics, March, 1912.

Recovering From Pneumonia.

To hasten convalescence from pneumonia the physician will find a substantial aid in Cord. Ext. Ol. Morrhuæ Comp. (Hagee).

Its distinctive service in inflammations of the air passages and the function it serves as a nutritive, entitle it to first choice as a reconstructive product, and for these reasons it is the agent *par excellence* in convalescence from pneumonia.

Discrimination in Choosing an Anodyne.

The exercising of more than ordinary care in choosing an anodyne, particularly in the case of women and children, is quite essential. This is all the more so when it is remembered what distressing after-effects follow the use of some anodynes.

The fact that careful practitioners are partial to Papine (Battle) and continue to use it year after year indicates its superior features. Papine (Battle) affords a maximum of anodyne properties with a minimum of evil effects.

Blaud's Mass in Liquid Form.

The chief advantage of a preparation such as Lilly's Liquid Blaud is due to the fact that it enables the physician to have the patient prepare, extemporaneously, fresh ferrous carbonate at the time of taking each dose. This remarkable and unique peculiarity of Liquid Blaud also makes it a very delicate preparation and led some to think that it would be impossible to place it with the pharmacists for physicians prescriptions. After considerable experimentation what at first was thought to be an insuperable difficulty was neatly and effectively overcome as will be explained. Special precaution has to be observed in bottling it because the oxidizing influence of moist air on the hygroscopic glycerin solution containing the component parts of Blaud's Mass, might easily cause deterioration.

In making Liquid Blaud, ferrous sulphate and potassium carbonate are first dissolved in anhydrous glycerin. The air in the bottles to be filled is replaced by carbon dioxide; a small amount of liquid petrolatum is introduced into each bottle and the glycerin solution of the iron and potassium salts is then poured into the bottles. The liquid petrolatum, being lighter, rises to the surface of the glycerin solution and forms a layer which excludes all atmospheric moisture.

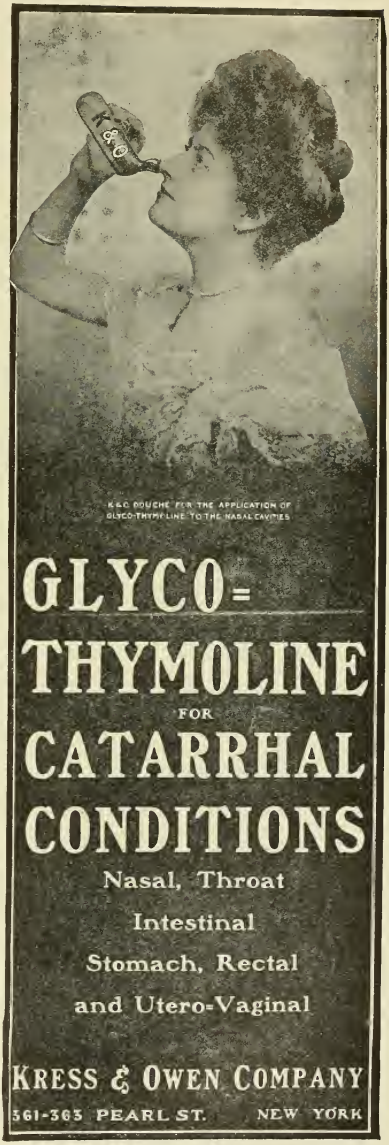
At the time of taking a dose the bottle is shaken and the petrolatum is broken up into minute globules and thoroughly distributed throughout the glycerin solution so that only a small portion is lost in pouring the dose. When the dose is mixed with water, the two salts react and the fresh ferrous carbonate s formed, appearing as a flocculent greenish precipitate. After the bottle has been set at rest, the petrolatum rises to the surface and forms a layer so that the solution is again protected from the atmosphere. Thus by a very simple but ingenious device Eli Lilly & Company made it practicable for the physician to give any patient the advantages of this very effective but delicate hematinic provided a few simple directions are followed.

Lilly's Liquid Blaud has been steadily growing in popularity among physicians who find it advisable to prescribe iron, since it permits of the administration of carbonate of iron in its most assimilable form. Liquid Blaud is supplied plain with arsenic, with strychnine and with arsenic and strychnine.

Chronic Intestinal Stasis.

At a meeting of the Glasgow Medico-Chirurgical Society Sir W. Arbuthnot Lane delivered a lecture on Chronic Intestinal Stasis. By chronic intestinal stasis was meant such a delay in a portion or portions of the gastro intestinal tract as resulted in the absorption into the circulation of more toxic matter than the organs whose functions were to convert, convey, and eliminate them could deal with. Its mechanism was the following: The condition was primarily a stasis in the large intestine, and was most marked in the cæcum, ascending colon, and sigmoid. The sigmoid, with its solid contents, tended to pull into the pelvis, and at an early date resistances to this prolapse were crystallized in the form of bands at-

tached to the outer surface of the meso-sigmoid, fixing the mesentery and later the sigmoid as a straight rigid tube to the floor of the iliac fossa. Among the disastrous consequences which sometimes followed the development of these bands were involvement of the ovary and Fallopian tube in adhesions, the production of ovarian cysts, wasting of the muscle wall of the bowel, obstruction of the bowel, the formation of hernial diverticula, and inflammatory changes, with possibly cancerous infection later. The cæcum tended to be displaced by hydraulic pressure in the erect posture into the true pelvis, and this tendency was specially marked in women on account of their longer abdomen and bigger pelvis. Here also resistances were developed in the form of bands or membranes running in two directions, one upwards and outwards to be attached to the adjacent peritoneum, and the other in and along the posterior wall of the mesentery which held up the termination of the ileum. In either of these bands the appendix might be involved, with resulting "appendicitis." By the latter band the ileum was not only kinked at one point, but was also twisted on itself so as to be still further occluded, so that the passage of its contents into the cæcum was obstructed, with the following results: Material accumulated in the small intestine and exerted a drag upon the vertically placed termination of the duodenum. The duodenum in consequence dilated and changes took place in its mucous membrane, which were exaggerated by the infection of the intestinal contents resulting from their delay. Engorgement of the mucous membrane was followed by inflammation, abrasion, and ulceration. The hepatic and pancreatic ducts ware also infected, and changes of an inflammatory, and later of a cancerous, nature developed in the pancreas. Gall-stones were formed in the gall bladder which might produce cancer, and the infection of the hepatic ducts changed the secreting power of the liver. Spasm of the pylorus developed to prevent the passage of the compressed duodenal contents back into the stomach, while the contents of the stomach were dammed back and changes consequent on gastric distension resulted—degenerative and inflammatory changes in the mucous membrane, with, later, ulceration and cancer. Stasis resulted in the absorption into the circulation of an excess of toxic products, which produced degenerative changes in every tissue and organ. If operations on the drainage scheme had done nothing more than demonstrate the damage done by these poisons, the remarkable power of repair which the tissues exhibited on being freed



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from their malign influence, and the extraordinary improvement in the function of every organ after operation, they would have been fully justified. Thus, the pigmentation of the skin and the coldness, blueness, and clamminess of the hands which characterized patients with chronic stasis disappeared rapidly after operation. In so-called Bright's disease, which was merely a product of chronic intestinal stasis, the exclusion of the large bowel was followed by an improvement in functioning as extraordinary as it was rapid. In female patients suffering from stasis the breast was often indurated and knobby; if the supply of toxins were eliminated a soft, healthy organ resulted. A healthy breast in a subject showing no evidence of stasis did not become cancerous. The influence of these toxins on the nervous system was illustrated by the case of a woman who had been confined to bed for many months, and whose mental condition was such that she was regarded by many as an imbecile. Within a few weeks of the removal of the large bowel she became a happy, active, intelligent woman, and has since lived usefully, earning her living. A woman who had suffered for nine years from epileptiform neuralgia of the right fifth nerve was sent from South Africa to have the Gasserian ganglion removed. She was definitely static, and her symptoms varied with her toxicity. She was short-circuited with the result that all symptoms disappeared and her general health and weight improved rapidly. In another patient, a man, intense headaches associated with vomiting, suggestive of cerebral tumor, disappeared abruptly after an ileo-colostomy. Removal of the large bowel had been followed by very rapid subsidence of a large adenoma of the thyroid, and typical symptoms of exophthalmic goitre of long standing associated with intestinal stasis had rapidly and permanently disappeared in other cases. The extraordinary improvement that resulted from short-circuiting and the disconnection or removal of the large bowel did not mean that the colon was the chief source from which toxins were absorbed in excess. The improvement was largely due to the fact that the evacuation of the small intestine was facilitated by its introduction into the pelvic colon, so that the infection of its contents by organisms which grew in the stagnating material in the large intestine ceased abruptly, and the production and absorption of toxins therefore no longer took place. —The London Medical Lancet.

An Ally Worthy of Confidenee.

It is going on toward 20 years since Gray's Glycerine Tonic Comp. was first placed at the service of the medical profession. During all this period Gray's Glycerine Tonic Comp. has maintained the standards that first attracted attention and the busy practitioner has ever found it an ally worthy of confidence. It never disappoints and in the treatment of atonic conditions, particularly of the gastro-intestinal tract, it is often the one remedy that will produce tangible and satisfactory results. The physician who does not use it in his practice is denying his patient many benefits that can be obtained in no other way.

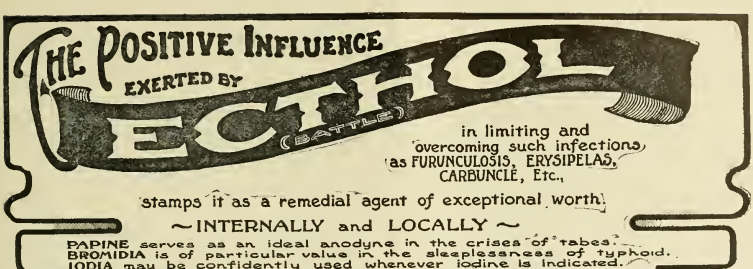
Chronic Catarrhal Diseases.

Chronic catarrh never fails to indicate general constitutional debility. Local treatment is always desirable but for permanent results efforts must be directed toward promoting general functional activity throughout the body, and a general increase of systemic vitality. The notable capacity of Gray's Glycerine Tonic Comp. in this direction readily accounts for the gratifying results that can be accomplished through its use in the treatment of all chronic catarrhal affections, but especially those of the gastro-intestinal canal and respiratory tract. The particularly gratifying features in the results accomplished by Gray's Glycerine Tonic Comp. are their substantial and permanent character. This is naturally to be expected since they are brought about through restoring the physiologic balance of the whole organism.

Vaso-Motor Derangements.

The part played by the vaso-motor system in countless diseases is at last thoroughly recognized. As a consequence, circulatory disorders are among the most common functional ailments that the modern physician is called upon to correct. Various heart tonics and stimulants are usually employed, but the effect of these is rarely more than temporary. To re-establish a circulatory equilibrium that offers real and substantial relief from the distressing symptoms that call most insistently for treatment requires a systematic building up of the whole body. Experience has shown that no remedy at the command of the profession is more serviceable in this direction than Gray's Glycerine Tonic Comp.

For nearly 20 years this standard tonic has filled an important place in the armamentarium or the country's leading physicians. Its therapeutic efficiency in restoring systemic vitality and thus overcoming functional disorders of the vaso-motor or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PAPINE serves as an ideal anodyne in the crises of tabes.
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circulatory system is not the least of the qualities that account for its widespread use. The results, however, that can be abcomplished in many cases of cardiac weakness have led many physicians to employ it almost as a routine remedy at the first sign of an embarrassed or flagging circulation.

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

Nasal and Aural Infections.

There is a growing impression among specialists in those diseases that catarrhs of the nose and ear, especially chronic discharges, are commonly the results of mixed infections. If this view is correct, is it not a fair inference that Mixed Infection Phylacogen may provide a solution to one of the most perplexing problems that the profession has been called upon to solve? There is ground for such conclusion. Certain it is that the Phylacogen referred to has produced some very satisfactory results in numerous cases which had failed to respond to conventional modes of treatment. The writer recalls several cases of this character that have been reported in the medical press during the last year and a half.

An open letter to the profession which is appearing in leading medical journals over the signature of Parke, Davis & Co. adduces additional evidence of the value of Mixed Infection Phylacogen in stubborn nasal and aural infections. This communication, which bears the title "A Letter to Medical Men," cites some cases that appear strongly confirmatory of the mixed-infection theory of etiology. All of the reports are interesting. At least one of them is remarkable: it deals with a housemaid who suffered almost total deafness in one ear for twenty-one years and whose hearing in the defective organ was practically restored after eleven injections of Mixed Infection Phylacogen.

The Pneumonia Convalescent.

While the course and progress of acute lobar pneumonia is short, sharp and decisive, the impression made upon the general vitality is often profound, and apparently out of proportion to the duration of the disease. Even the robust, sthenic patient is likely to emerge from the defervescent period with an embarrassed heart and general prostration. In such cases the convalescent should be closely watched and the heart and general vitality should be strengthened and supported, and this is especially true as applied to the patient who was more or less devitalized before the invasion of the disease. For the purpose indicated, strychnia is a veritable prop upon which the embarrassed heart and circulation can lean for strength and support. As a general revitalizing agent is also needed at this time, it is an excellent plan to order Pepto-Mangan (Gude), to which should be added the appropriate dose of strychnia, according to age, condition and indications.

As a general tonic and bracer to the circulation, nervous system and the organism generally, this combination cannot be surpassed.

The Tuberculous Invalid.

The pricking of the Friedmann bubble but served to still further confirm and accentuate the vital importance of the well defined methods of treatment for tuberculosis, that have given such encouraging results, i.e., fresh air, sunshine, rest, nutritive reinforcement and judicious medication. A proper combination of these four remedial factors is practically certain to place the incipient tuberculous invalid upon the road to recovery, if the patient is intelligently handled and the treatment persisted in. While it is, of course, acknowledged that the first three non-medicinal agents referred to constitute the vital elements of the upbuilding regime, considerable aid is afforded by judicious medication. Hematinic reinforcement should certainly not be neglected, in view of the secondary anemia which is almost always apparent. Among the agents which have produced the best results in the revitalization of the blood, Pepto-Mangan (Gude) is the most generally eligible and acceptable. As it is thoroughly palatable, neutral in reaction, free from irritant properties and devoid of constipating effect, the digestion of the patient is not disturbed, while the appetite and general vital tone improve more rapidly and satisfactorily than when hygienic and nutritive measures are depended upon exclusively.

They Will Make a Physician Successful.

I pin my faith to the Abbott Alkaloidal Company goods because they never fail me. I use great quantities of H-M-C No. 1, Uterine Sedative and Nervine, Anticonstipation (Abbott), Buckley's Uterine Tonic, Vaginal Antiseptic and your Vaginal Suppositories; in fact I use your line almost exclusively. These remedies will make a physician successful if he has the other requirements necessary—the "know how," and the "know why and when."—A. D. Hilton, M.D., Grannis, Ark.

Angioma of Synovial Membrane of Elbow.

Eve reports the case of a girl aged 11 years, in whom one year and nine months previously the elbow became swollen and painful. The patient was laid up with it for a fortnight. The swelling was attributed to a blow on the part two or three years previously. Since then the elbow has become swollen every few weeks. Present condition: There was a bluish bilobed swelling on the outer side of the head of the radius; the swelling disappeared on raising the arm; after applying an elastic ligature to the upper arm it stood out prominently and the circumference of the limb at the site of the swelling was increased one quarter inch. The writer drew attention to this condition in 1903, and described two cases of angioma involving only the synovial membrane, and two others implicating also the surrounding muscles. The chief interest of the condition lies in the diagnosis from localized tuberculosis of the synovial membrane. This may usually be made by observing the changes in the swelling induced by alterations of the venous circulation. Angiomata of the synovial membrane often give rise to a good deal of pain, increased by exercise. There may be tenderness, limitation of movement, wasting of muscle, and two of the writer's cases complained of starting of the limb at night.—Proceedings of the Royal Society of Medicine.

Gunshot Injuries of the Arteries.

Makins points out that there have been changes in the shape of the rifle bullet since 1900. That used in the Balkan wars was longer, narrower, and more pointed than that used in the South African war, and as a result the character of the injuries was different. The chief features in the wounds of vessels produced by bullets of small caliber are lessened liability to external secondary hemorrhage, and the greatly increased frequency of the development of some form of aneurysm. These peculiarities are attributed partly to improved surgical treatment, and partly to the narrow clean track of the bullet. It is a primary rule in surgery that the bleeding vessel should be secured as soon as possible after the injury. In military surgery this rule cannot be generally applied, and an anomaly in surgery thus arises. The author is led to discuss the methods by which Nature controls the bleeding from arteries thus injured. The vessel may be occluded primarily by provisional thrombus, and the wounds in the vessel may cicatrize. This has been observed postmortem in the superficial femoral fifteen days after injury in a case in which the patient died of typhoid fever, and in the abdominal aorta in a case in which the patient died seventy days later from subphrenic abscess. Adhesion of the vessels and nerves may provide another means of occlusion. Spontaneous cure may be the end result of hematoma due to injuries to arteries, of contraction to form circumscribed traumatic aneurysms, and, eventually, of consolida-

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Malignant Intra-Ocular Tumors.*

By C. R. Dufour, Phar.D,; M.D., Washington, D. C., Clinical Professor Ophthalmology, Otology, Rhinology and Laryngology, Georgetown University Medical School and Hospital.

There sometimes occur other malignant intraocular tumors than sarcoma and glioma, but as these are the most frequent we come in contact with, I shall only discuss them. Sarcoma of the iris and ciliary body are similar in character to that of the choroid, so what I say in regard to the choroidal tumor will practically apply to those of the iris and ciliary region.

Sarcoma of the choroid is the chief of the malignant intraocular tumors occurring in adult life, in contrast to glioma retinæ, which is found in very young children, and which I think is sometimes congenital.

Choroidal sarcoma is a disease of adult life, from 18 years up to 60 or more years. It is always primary, single, and most always pigmented. There is a white variety, but it is more rare than the pigmented. The frequency of its occurrence is estimated by Dr. Hill Griffith of the Royal Eye Hospital, Manchester, England, who saw forty cases out of over a hundred thousand eye cases, being .03. Dr. Freudenthal gives .04, Dr. Fuchs, .06. It occurs about 15 to 25% oftener in males than in females. As to its etiology, little is known. Injuries do not cause it. Those in whom it occurs are usually in fairly good health. It usually begins in the larger vessels, and extends by means of the vascular channels. The lymph glands do not seem to be affected. It arises by a broad base from the choroid and appears as a round knob-like prominence, growing usually toward the anterior part of the eye. It is composed almost entirely of pigmented cells, which are mostly long or short spindles with a single nucleus, often arranged in a whorled manner round the vessels. As the growth enlarges the retina is pushed before it. The different stages of this disease are four in number. In the first the tumor is small, the tension normal or subnormal, there is no inflammation, and the media is clear. This stage may last from six to twelve months, sometimes longer. At this period the patient may have noticed a defect in his vision, a dark spot, which is a scotoma and corresponds to the location of the tumor, in its effect on the visual field.

*Read before the Medical Society of the District of Columbia.

An ophthalmoscopic examination at this time will probably reveal a rounded opaque prominence, with vessels coursing over it, the retina may still be smooth, not having been detached by the pressure of the growth. After a while the detachment becomes total, the eye inflamed, and blind, the tension elevated, which is the second stage.

In this stage the tumor is growing larger, the cornea dull, the anterior chamber shallow, the pupil dilated, the whole condition of the eye simulating chronic inflammatory glaucoma. If the media remains clear the eye ground can be examined by the ophthalmoscope. Often the media and lens becomes cloudy, which fact together with the elevated tension is liable to cause a mistaken diagnosis of glaucoma with cataract to be made. It is of great importance to make an accurate diagnosis, to differentiate between an intraocular tumor and a glaucoma, for an iridectomy is just as strongly indicated in glaucoma as it is contraindicated in sarcoma. In glaucoma, if the operation is performed in time, the sight will probably be restored, and the disease checked in its progress, while in sarcoma the condition would be made worse by delaying the enucleation, and it would be very prone to hasten a fatal issue by giving rise to infection of neighboring tissues. Information from the patient may be elicited when the glaucoma is secondary to an intraocular tumor, that the sight was lost for some time before the eye became inflamed, and that the usual symptoms of glaucoma, viz., transient attacks of pain, dimness of vision, colored rings around the light, coming on at night and disappearing after sleep, have not been present, also that there has been no remissions of the symptoms, such as occur in glaucoma. If sufficient vision remains to take the visual field, the retention of the nasal side would argue against glaucoma, as that part of the field is the first to go in that disease. Notwithstanding all the skill and care, cases are reported where good oculists have removed glaucomatous eyes, which were thought to be sarcomatous, and iridectomy has been performed on eyes with sarcoma. It seems from this that this mistake cannot altogether be avoided. Sometimes there is an accumulation of fluid between the choroid and retina, due to a disturbance of circulation in the choroid, caused by the presence of the tumor, which causes a larger detachment of the retina than the area occupied by the growth, which

fact prevents it being seen through said detachment and fluid. The tension in simple detachment of the retina is usually early diminished. In a tumor it is at first normal, then increased.

If we should find a retinal detachment in a person whose eye had not been injured or who has not a high degree of myopia, the fundus of the eye must be very carefully examined from time to time, in order to ascertain whether there is only a simple detachment of the retina, or a detachment caused by a tumor.

Dilatation of the anterior ciliary veins is an additional argument for the presence of an intraocular tumor, the cause of which is that the blood in the uvea is prevented from flowing out through the vasa vorticosa, and thereby has to make its exit through the anterior ciliary veins, which fact causes them to dilate. There are two methods used together with those mentioned which materially aid, and render the diagnosis of intraocular tumor about as certain as it can be made. I refer to transillumination and puncture. The transilluminator is a portable electric light to which is attached a conical glass rod, the light is transmitted to the tip, through which it emerges. In a darkened room the tip of the transilluminator is placed on the sclera; in a normal eye the pupil will glow with a red light. If there should be a dark pigmented tumor in the interior of the eye, the pupil will remain dark, when the sclera is illuminated from that side. The operation of puncture is performed with a fine needle. The eye ball is cocainized with a few drops of a 4% solution, the needle is then passed through the sclera about where the tumor is located. If there is a tumor and the needle penetrates it, the needle will not be freely movable as it would be if it were in the vitreous or subretinal fluid. Should there still be doubt as to the presence of a tumor, the eye being blind, and painful, *I would unconditionally advise an enucleation.* As before mentioned the pain is caused by the increase of tension; this increase is not due to the tumor occupying a certain space in the eye, that can be compensated for by a decrease of vitreous. The congestion which the tumor produces in the veins of the choroid causes an increased transudation of fluid in the interior of the eye which is followed by elevated tension. From this fact it will be seen that small tumors may cause elevated tension, or a large one may not, just in proportion to the increase of transudation of fluid in the eye.

The third stage is reached when the tumor breaks through the eye ball, and continues to grow outside. It may break through the eye ball anteriorly; in such event, dark hard prominences will be seen in the circumference of the cornea. In this case the diagnosis is easily made. Should it break through the eye ball, posteriorly, the diagnosis is not so easily made, as no evidence of the tumor will be visible, until the nodules growing posteriorly push the eye ball forward and ccuse an exophthalmos. The pain as a rule abates or ceases entirely after the eye ruptures, because of the lessened tension. As soon as the tumor is freed from the intraocular pressure it grows very rapidly, soon filling the orbit, growing beyond and becoming very large, a mass as large as a good sized orange. It ulcerates, which causes frequent hemorrhages. It grows backwards to the brain and the fourth stage is reached when metastatic nodules develop in the internal organs, most frequently in the liver. Sometimes hemorrhage of the retina is followed by glaucoma, and if the clot is large there will be increased tension, there will be a large pigmented mass in the eye, all of which might lead to a wrong diagnosis, of intraocular tumor. The chief cause of death is the metastasis to other organs; this usually occurs from two to three years after enucleation. A few of the reports as to the frequency of death I will repeat. Dr. Martin reports 62% in 35 cases, Langford and Collins 50% in 79 cases, Freudenthal 37% in 24 cases, and Fuchs 23% in 17 cases. Dr. Griffith of England says that 50% may be reckoned as permanent cures. I think it is generally conceded that the stage at which the eye is enucleated has little if anything to do with the metastasis. As to the prognosis from the histological character of the growths, I believe the round celled, vascular ones are more malignant than the spindle-celled and less vascular. The young recover better than the old, the average age of recovery is 38 years, the fatal cases 52. If a recurrence of the nodules takes place in the orbit, after enucleation, it must be entirely exenterated, the orbital periosteum removed and the bony walls curetted. The cavity is then packed aseptically and treated until well. The nodules are not likely to attack the bony walls or spread to the cranial cavity after exenteration. I report the two cases I have seen in the last few years:

Mr. G., aged 55 years, consulted me about his eye, the right one had been gradually getting worse for several months, it was now beginning to pain. Upon examination the eye was found to be congested, the pupil dilated, the tension increased. The media was hazy, but I was able to make out a detachment of the retina, elevated and dark in color. The sight was about gone. The increased tension, the pain, the elevated detachment, his age and the general history,

all pointed to an intraocular growth. I told him my opinion and advised immediate enucleation, to which he consented. It was found to be a melanotic sarcoma of the choroid, arising from the posterior part of the eye. I kept track of him until about two years ago. Since that time I have not heard from him, and do not know if he is still living.

Case 2.—C. H., a young man aged 20 years came from West Virginia. His left eye was sightless, had been getting that way for a year or more. He did not know what the trouble was, but waited until it was convenient for him to come to the city to have it cured, as he said. The tension was increased, the pupil dilated, the iris was tremulous, the pupil was entirely filled with a greyish mass, which I thought was the retina that was pushed there by the tumor, which filled the eye. He was very much surprised when I advised immediate enucleation, and deferred it until he went home and consulted his parents. I advised that he make no delay, telling him the consequences that would surely arise if he did not, that his chances for getting entirely well were a little more than even if he had the eye taken out immediately. He came back in about a week, the eye was enucleated, and a large sarcoma found in it, and as I suspected it had pushed the retina into the anterior chamber, completely filling it, and blocking the pupil. I heard from him several months ago; he was alive and well.

Glioma of the retina is a malignant intraocular tumor, which occurs in infancy and up to five years of age. It is often seen at such an early age that its beginning must have been prenatal.

Several children of the same family are often attacked, one after the other, so that the cause is attributed to some congenital vice of development. As a rule it attacks only one eye, though many cases are reported where it was bilateral.

Wardrop in 1809 gave the first good description of glioma. He had 17 cases which he called fungus "hæmatodes", the malignancy of which he was aware. His statement that it grew from the retina was correct, as the works of Virchow and Von Graefe have proved that it springs from one of the granular layers of the retina. Conheim's theory is that an adventitious fetal development of the nerve fibres and ganglion cells results in the establishment of "rests," from these the glioma grows. Treacher Collins says that glioma cells and those of the undifferentiated cells of a three months fœtus bear a close resemblance to each other, and it is more than probable that the developed tumor bears a direct relation to the halted development of the fœtal retina. Axenfeld is of the opinion that the glia and ganglion cells may be the outgrowth of the undifferentiated cells of the tumor. Fuchs is of the opinion that a congenital morbid disposition lies at the bottom of glioma, as shown by the case he reports. A mother brought her four-year-old son to the clinic, with a glioma of the right eye. She said that it had existed only one year, but it was quite far advanced. The eye ball was enlarged and the glioma was growing out from it into the orbit. The whole orbital contents were removed, but the child died six months afterwards with brain complications. Some months after the mother brought her second child, two years of age, to the clinic. She said that he had been blind in the right eye since birth, although it had been but recently that the eye became larger than the other. This child had glioma, was operated upon and died a year afterwards. Soon after the mother brought her last and only child, then only a few months old, fearful lest it had the same dread disease, because she had noticed the yellow reflex in the eye, which she had seen in the eyes of the other children. This child did not have a glioma but a congenital coloboma of the iris, downwards, as well as a coloboma of the choroid.

Glioma of the retina may develop under two forms, viz., as circumscribed and as diffuse. The former, which is found in most cases, grows from the retina as a tumor, may extend forward into the vitreous, and is known as glioma endophytum, or it may pass backwards into the subretinal space and is known as glioma exophytum. Either form may cause retinal detachment. Glioma has its different stages, similar to sarcoma of the choroid. In the first stage, the inflammatory symptoms are absent, there is, however, a yellowish reflex to be seen in the eye, which is usually sightless. In the second stage the tension becomes elevated, the eye congested and painful, regressive metamorphoses occur, starting in the nucleus or in the protoplasm, or in both, causing nucleus death in the cells. These cells become necrotic, swell, and cannot be stained by hæmatoxylin. In the third stage the tumor grows out from the eye, which soon becomes transformed into a large bleeding mass, protruding way beyond the eye. Metastasis to the liver, brain and often other organs marks the fourth stage, and the child dies from exhaustion and the general effects of the disease. In some rare cases glioma exhibits another manner of growth. It grows at first like the type just mentioned. It undergoes regressive metamorphosis, and simulates an iridichoroiditis or chronic panophthalmitis. Degeneration takes place, the fluid parts of

the eye may be absorbed and the eye shrinks in consequence of the inflammatory processes, causing it to resemble progressive bulbar atrophy, or bulbar phthisis oculi. After a while the disseminated patches in the choroid or optic nerve, or in both, begin to grow again, fill the eye, break through it, and ultimately cause the well known end. This condition is known as Crypto-glioma. Pseudo-glioma, called amaurotic cat's eye, because amaurotic means blind, and the eye shines like the cat's in the dark. This condition is an irido-choroiditis, and simulates a glioma, for there is a yellowish reflex in the eye, the sight is gone, the tension may be normal, sub-normal or elevated. There may be pain. Care must be taken in making the diagnosis of pseudo-glioma, and we must not be too sure we have no malignant condition present, for no diagnostician, no matter how skillful, is able, at least for a certain period of time, to tell whether a seeming irido choroiditis may not develop into a crypto-glioma. Some authorities say that pseudo-glioma is a diagnostic mistake, and that in the course of time as our knowledge increases, pseudo-glioma will become rarer. Prof. Schobel, of the University of Prague, says crypto-glioma are true gliomata which have not been, and as yet cannot be recognized in the early stages, the latter course of the affection and the anatomical examination alone revealing their true nature. Therefore they are such gliomata as run their course under the picture of a disease of a different nature, and thus lend to an incorrect diagnosis.

The course of this disease from its beginning to a fatal termination usually extends over several years. The treatment consists of an early removal of the eye, it must be removed before the tumor penetrates it and begins to grow outside. As long as the growth is confined to the eye, and an enucleation is done, the prognosis is fairly favorable. If the growth is already out of the eye, before it is seen by the surgeon, then a thorough exenteration of the orbital cavity must be done, after the eye is removed. In enucleating the eye, the optic nerve should be divided as far back as possible. In pseudo-glioma the eye should be enucleated, when there is elevated tension, and pain. The eye is sightless, and is a constant source of pain, so I think it is better out than in; the cosmetic effect of an artificial eye is certainly better than one that is chronically inflamed, of no use whatever, and which might eventually develop malignancy. *As soon as the diagnosis is made of malignant intraocular growth, the eye must be immedlately removed.* I think there is no exception to this rule.

CASE 1.—Child brought to me in 1910 by his father, who had noticed a peculiar appearance in the eye, and also that the eye was blind. The boy was healthy looking, was 3 years old. The eye was congested, the tension elevated, and there was a yellowish reflex in it, which could be seen by focal illumination. By means of the ophthalmoscope the tumor could be seen, in the posterior chamber, which it about filled, fine vessels were coursing over it. I told the father of the serious character of the disease and advised immediate enucleation. Though very loth to do so, he finally consented. The eye was removed and a section of it proved the growth to be a glioma.

CASE 2.—A young boy was brought to the ophthalmological section of this society by Dr. Heitmuller. This boy was suffering very much from pain in his eye. The eye was examined by the members of the society. The tension was elevated, the eye congested, the media fairly clear. The boy's age was beyond that in which a glioma is usually found, being about eight years. There was no sight. By the ophthalmoscope a small mass could be seen, with vessels coursing over it, but we could not satisfy ourselves whether it was a growth or not. It was concluded that owing to the fact that the eye was blind, that he was suffering such intense pain, so much so as to prevent him from sleeping, and was beginning to tell on his nervous system, that the eye should be removed. I enucleated the eye at Georgetown University Hospital. A microscopical examination of the wet tissue revealed only inflammatory condition. A section was made, embedded in parafin, which was laid aside until it would be convenient for the pathologist to examine it. When he afterwards attempted to cut it, it was found to be of such bony hardness that it could not be done. This was evidently an irido-choroiditis, plastic in character, simulating very closely a growth, and causing glaumatous symptoms, and blindness. The enucleation was justifiable because nothing would ease the pain or restore the sight.

In the time allotted me for my paper, I can write but briefly on this important subject, much must necessarily be omitted which would be of interest. In concluding I will report a few cases which will show the fearful results of this terrible malady and say that this disease, though not frequent, is so terribly fatal that I would emphasize the importance of an early recognition of the trouble and the necessity of immediate removal of the eye, and would say to the general physician to always remember that such a condition may at any time be found in the eye or eyes of the babies

they attend. Examine the eyes as a routine, and by focal illuminatiod, and especially in families where there has been malignant growths in the parents. Dr. Van Hoffman, Jr., reported a double case of glioma in mother and child. The mother had been operated 28 years before for glioma. In the reports of the Royal London Eye Hospital, Dr. Owen reported a similar case. A woman operated for glioma in infancy, married, bore a child which also had glioma, which was removed. A full sister to this mother bore two children who had glioma. He operated on a boy two years of age; this boy married at 21, his wife bore seven children, two of whom had glioma. The first was operated upon, but there was a recurrence. An operation was refused on the second, both children died.

At the ophthalmological section of the A. M. A. at Los Angeles, Cal., Dr. Macleisch reported a very pathetic case. A child of wealthy parents was brought to him, and in whose eye he discovered a glioma. He advised enucleation. Shortly after this a glioma was discovered in the other eye. The parents asked if nothing but the removal of the eye would cure her. When answered in the negative, they decided to take her abroad for consultation. Dr. Galiszowski, of Paris, confirmed the diagnosis. They then went to Lourdes, where they were at the time of this report. There is no doubt what the result will be, or has been, unless the eye was removed. This report was made in 1911. Dr. Arlt, of St. Louis, reported a case of glioma in a child brought to him. The parents consented to the enucleation, which was done. About a year afterwards they brought the second child to him. He found a glioma in each eye. The parents were told that to save the life of the child both eyes must be removed. They refused, saying they would prefer to see the child die, which it did. Whenever they see the doctor they always say how sorry they were that they did not have the operation performed.

Dr. Savage reported two cases in which the glioma was in both eyes. The eyes were removed and the children are well.

Dr. Woods, of Baltimore, reported a double case of glioma, which was operated upon, and the child was well at time of report.

Dr. Weeks, of New York, reported a case of sarcoma which demonstrates the difficulty of making a diagnosis. A man 24 years of age had, some year and a half ago, noticed a defect in his visual field. He consulted an oculist in Syracuse, who said he had a mass in the background of the eye. He also said that he must keep it under observation for a while, as he could not determine what it was. After a while he decided it was a sarcoma. He put the patient on mercury and iodide of potash to ascertain if there was syphilis. A Wassermann test was not made. In 1910 this patient was seen by Dr. Weeks, who found a brownish colored mass above the fovea, with an elevation of .5 mm. A Wassermann was done and tuberculin used, for the purpose of differentiation. The patient was under observation for three months, after which it was decided best to remove the eye, which was done, and the growth found to be a very small sarcoma. The doctor concludes by saying that he knows of no other case on record where the sarcoma was so small.

Dr. Thompson reported the most remarkable case of heredity on record. A little girl was brought to his office in 1903 with a glioma of the right eye. The mother writes the following description. The first child affected with cancer was a boy born in 1869; died in 1871, no medical attendant; second child born in 1872; disease was noticed in 1873; the eye was removed in September, 1873, cancer came in other eye eleven months later, and the child died in 1875. The third child died from cancer in 1882. The fourth child born in 1883, died in 1887 from same disease. Fifth child born in 1888, disease noticed in 1890. It died in 1891. She is 55 years old, the mother of 14 children, 7 boys and 7 girls. I have lost no children but from cancer.

May I, in closing, be permitted to repeat and say that in the aggregate the cases are not many, and the diagnosis is easy, yet the general physician, probably not having seen a case, might be inclined to think it a cataract and advise delay. I would advise if in doubt, secure expert advice, and remember that early recognition of the disease and then *immediate enucleation* of the eye is the only method by which the life of the child can be saved.

1343 L St., Washington, D. C., and 722 King St., Alexandria, Va.

Our Tuberculosis Knowledge.

By Mary E. Lapham, M.D., Highlands Camp Sanatorium, Highlands, N. C.

The Charlotte Medical Journal for March, 1914, says, "The newspapers recently reported the arrest of a citizen in Wilkes county, N. C., charged with having tuberculosis. Would it not be well for advanced sanitary authorities to take stock, as it were, and after admitting that probably one-half of the people are afflicted with tuberculosis at some period of their lives, carefully investigate the established facts on which the extreme phthisiophobic craze is based, with a view to ascertaining if more than one-

fourth of the present dread of tubercular infection has any real scientific, or experimental, or clinical basis?"

Let us suppose that the "advanced sanitary authorities" of the whole State of North Carolina should "carefully investigate the established facts." How would they do it? What sort of an undertaking would it be? How long would it take?

In the first place, what are the "established facts?" The careful investigation of the established facts so lightly suggested by the editor demands a thorough investigation of the whole tuberculosis problem. If this investigation should be made by competent students able to read German, Italian, French, Danish and all the authorities in all languages bearing upon the question, far from arriving at a clear definite conception of the etiology and nature of the disease, the further they waded into the mass of isolated facts the greater would become their confusion. Instead of threading the labyrinth of conflicting statements and theories easily and surely by following a logical sequence of facts, they will find themselves astounded by the absence of any sure footing, until all bewildered and helpless, each will cry, "I see that I know nothing. Who will show us the way, who will tell us what really is and what really is not known of this disease?"

To begin with, as our editor suggests, has more than one-fourth of the present dread of tubercular infection any real scientific, or experimental, or clinical basis? How can this question be answered? By determining to what extent tuberculosis is a contagious disease. How can we do this? The proofs that tuberculosis is a contagious and communicable disease are very striking. They are based upon exposure whether from parents or house infection or association of any kind with tubercle bacilli derived from a human source. Where one member of a family after another goes down, or the infection of a house strikes one inmate after another, it hardly seems necessary to question cause and effect, it is too plain, too evident. We are taught, and all our tuberculosis work is based upon the one doctrine, that tuberculosis is only perpetuated by direct transmission from case to case. If we could stop this transmission in all instances we would stop tuberculosis, because there would be no way of handing it on. Since the sputum is the chief agent of transmission, in order to obliterate tuberculosis we must destroy the sputum. The patient can prevent the transmission of his disease, therefore the education of the patient and his co-operation is of fundamental importance. It all sounds so simple, so straightforward: isolate, educate and get the patient to co-operate. Destroy all sputum, prevent all transmission and tuberculosis will vanish. It is only a question of money so that enough institutions may be equipped to accomplish these results.

This is our creed: We believe that tubercle bacilli cannot exist outside the human body, and that the only way to perpetuate the disease is by transmission from case to case. Prevent this transmission and you prevent the disease. Upon this belief hangs all our tuberculosis work. It is therefore advisable to establish the truth of this belief before intrusting the future to its care.

We have to know whether tubercle bacilli can live outside the human body, whether there is any other way of acquiring the disease than by direct transmission from case to case, and whether tuberculosis could be obliterated if we could put every patient and every tubercle bacillus derived from such a patient upon an island in the Pacific Ocean; or whether the disease would still persist.

What evidence have we that tubercle bacilli may exist outside the human body? We know that a disease characterized by the production of tubercles accompanies the evolution of life through all the spires of form almost from the worm up to man. Fish, frogs, toads, lizards, snakes, turtles, poultry, birds, sheep, pigs, dogs, cats and cows are all subject to the formation of tubercles, and that, in all these animals, whenever we find a tubercle, we find bacilli closely allied to each other, no matter in what animal these tubercles and their bacilli are found

We know that a tuberculin made from any tubercle bacillus of any animal will cause a definite tuberculin reaction when injected into any animal suffering from tuberculosis, even when a diseased condition is not clinically evident. Biological proofs of the genetic relationship of all bacilli associated with the production of tubercles is abundant, why is this knowledge not related to the prevention of tuberculosis? Because we have not attempted to understand its real significance. Instead of establishing a fundamental fact upon which to base a general principle, we have merely been interested in experimentally proving that the tubercle bacilli of this or that animal could not induce tuberculosis in man, and were, therefore, of no importance and no influence etiologically. The broader principles have been entirely ignored and untouched. The real significance of the widespread production of tubercles and the genetic relationship of all tubercle bacilli is not whether the tubercle bacilli of fish or fowl can cause tuberculosis

in man, but whether the original source of all these manifestations still persist. When we can say why the pigeon and snake have tuberculosis, possibly we shall know more concerning the universal infection of mankind. What is true of one, may be true of all. When the tuberculosis of cows was first investigated, the point of greatest importance and the only question raised was: Can the tubercle bacilli of cows cause tuberculosis in man? Koch said, "No;" others said, "Yes," and this has been studied exhaustively by many officially appointed boards of investigation and an infinite number of individual workers, but the question, as to why cows have tuberculosis, has remained untouched and unstudied.

We know that by the time our children reach maturity that practically all of them are infected by tubercle bacilli, but it does not seem to have occurred to us that this universal infection of our children might be comparable to the infection of other animals and that a study of the etiology of the tuberculosis of cows and pigs might enlighten us as to the etiology of our own infection. This possibility is becoming appreciated. Brooks suggests that we may learn much from the management of tuberculous herds concerning the prevention of human tuberculosis, and there are many striking analogies in the fight for keeping the disease out of our herds of milk cows—and out of Palestine and Egypt.

In spite of our best efforts, it is admittedly impossible either to prevent the spread of tuberculosis among cows or to eradicate the disease from the herds. These two problems have not been solved, and it is admitted that we must utilize animals infected with tuberculosis and give up all idea of destroying them.

Much says that until recently tuberculosis was unknown in Palestine and Egypt. Now, it is advancing frightfully. The prophylaxis depends entirely upon institutional treatment, and it will be interesting to learn whether isolation and treatment of the manifest cases will avail better in Egypt and Palestine than it has in the United States, whether directed against the spread of tuberculosis among cows or human beings.

Why should cows have tuberculosis? They live an ideal life in ideal surroundings. There is no nervous tension, no overwork and under-feeding, no immorality, no alcoholism or syphilis, no crowded tenements, no dust from factories, none of the predisposing factors so influential with us; and yet, we are forced to realize that we cannot prevent the infection of cows by tubercle bacilli.

Practically all the world records as to fertility, milk and cream production are held by animals either themselves thus affected or the offspring of tuberculous ancestry. What is the source of this widespread infection of cows? Does it come from their feed or water? A striking resemblance of the tuberculosis of hogs to infantile tuberculosis is shown by Ryder's report. In 93% of autopsies of 120,000 hogs, the superior cervical glands were affected. Next in frequency were the bronchial glands, 27%, then the mesenteric lymph glands, 18%, and finally, the lungs, 7%. The tuberculosis of hogs is admittedly due to the conveyance of the infection through food and the manifestation of this infection does not take place in the gastro-intestinal tract itself, but in the lymph glands. This is explained as being due to a general dissemination of the bacilli by the blood stream and their arrest in the lymph glands. As Ryder says, "The disease in hogs is essentially produced by ingestion, therefore the glands and tissues associated with the digestive tract are the most frequent seats of infection. The superior cervical glands are nearly always affected, 93% being found at the post-mortem examinations held by the bureau inspectors during a consecutive period on 130,000 hog carcasses.

What is the source of this infection of hogs? From their food? Is it possible that the reason why so many species of animals are infected by tubercle bacilli is because these bacilli are so universally present? Are all these infections but different expressions of the same original cause? Are all children infected with tubercle bacilli because of their universal presence and the impossibility of avoiding them? If so, what is their source?

We have a few undisputed facts upon which to establish a working hypothesis. Tuberculosis is the most universal of animal diseases. Tubercle bacilli are invariably present in the tubercles. All these tubercle bacilli show the same marked biological characteristics. They are all acid fast bacilli.

All acid fast bacilli, no matter where growing, prove their genetic relationship by biological reactions. The "tuberculin" made from timothy bacilli will cause a better "tuberculin" reaction in the native inhabitants of its district than will a tuberculin made from the tubercle bacilli of a foreign race. It is barely possible that we have no adequate conception of the tuberculosis problem. That we are directing all our efforts against the acquisition of an infection which cannot possibly be avoided. If this be true, if the human race is as inevitably infected by tubercle as by colon

bacilli, should we attempt to prevent one more than the other? Would any of us assert that we could prevent the diseases caused by colon bacilli by preventing their entrance into the human body? If the entrance of tubercle bacilli is equally inevitable, then about all we can do is to watch the development of this infection in order to discover the very earliest suggestions of danger. Out of every hundred children one or two will be threatened with the development of tuberculous processes, while all the rest will have no trouble. The change from harmless residents to pathological agents is the beginning of tuberculosis. If we detect this change in time we can arrest the extension of tuberculous processes. If we do not, we allow them to develop, unless spontaneously arrested, and encourage the real danger from an infection by tubercle bacilli, which is failure to detect pathological conditions in time. Delayed diagnosis means death and by waiting until the disease manifests itself we foster and encourage delayed diagnoses.

It takes but a moment to write, "with a view to ascertaining if more than one-fourth of the present dread of tubercular infection has any real scientific, or experimental, or clinical basis." It would take a commission of our best scientific experts an indefinite length of time to answer it, but the effect would brilliantly demonstrate that our knowledge of tuberculosis is entirely inadequate and that we really know almost nothing of the disease or its infectious agent, or the best methods of protecting ourselves against its attacks.

How much do we know concerning tuberlosis? We know that it is caused by the bacillus of Koch, but we do not know how this infectious agent enters the body, nor when, nor why. We dogmatically assert that the greatest source of infection is the inhalation of the bacilli derived from the sputum. This is pure assumption and not based on established facts.

Has every child before it reaches maturi y inhaled enough tubercle bacilli from sputum to cause an infection? Then the case is hopeless, because what is true of children must be true of adults, and it is simply impossible to prevent an inhalation already existent. Moreover, the bacillus of Koch is not the only cause of human tuberculosis, and the disease exists without their presence when the infection is derived from cows.

If the tuberculosis of human beings can be caused by the tubercle bacilli of one animal, why not from others? We say that the bacillus of Koch differs from all other tubercle bacilli, but we cannot say that its characteristics were always inherent or that they have not been acquired. We say that the acid fast smegma bacillus is not a tubercle bacillus, and yet, under certain conditions, it induces tuberculosis.

Maher has shown the effects of cultural conditions upon the Koch bacillus and its radical alterations of its morphology. Much's granules, the loss of acid fast properties, the change to a coccus and various other structural alterations result in forms not in the least suggestive of Koch's bacillus.

Ferran, Van Calcar, Rabinovitch, and many others show that the characteristics of the Koch bacillus are not unalterable. Until we can trace these changes of form and properties through their varying manifestations, how can we know anything definite concerning the disease or its agent?

We are floundering in a sea of fatuous self-satisfaction. Because we think all is known, we make no efforts to discover. We take for granted that the dogmas and doctrines so unhesitatingly accepted are true and base the expenditure of twenty millions annually upon ignorance. Tuberculosis is costing the United States $900,000,000.00 annually, and there are 1,200,000 victims of the disease.

Does this look as if our methods were succeeding?

We have had two United States Senators interested in tuberculosis. If someone could convince them of the faults of our present knowledge and the need for thorough scientific research, possibly a bill could be put through Congress and an adequate study of the tuberculosis problem be made.

The Application of the Tuberculin Test to a City's Milk Supply.*

By Mosby G. Perrow, Ph.D., Health Officer, Lynchburg, Va.

In dealing with the application of the tuberculin test to a city's milk supply, the city of Lynchburg will be taken, not because it is intended to cite this particular application as a model to other cities, but because the method used was successfully applied here and with almost no friction.

The ordinance as passed by the City Council required the testing with tuberculin every cow supplying milk or cream to the city or the pasteurizing of such milk or cream, but it was also stated that no reacting cow could supply milk or cream to the city regardless of pasteurization, and further that every cow inside the corporate limits should be tested whether the owner sold milk or not. The reacting animal should

*Read before the Virginia Public Health Association at the University of Virginia, April 23, 1914

immediately be slaughtered under direction of the health officer or placed in quarantine by the State authorities.

Before this ordinance was offered for passage, three years were spent in diligent education of the public and the dairy herd owners. The people were impressed with the fact that no milk was safe, however sanitary in other respects the equipment and methods of the dairy, unless the milk was drawn from cows proven to be untainted by tuberculosis or was pasteurized. There thus grew up a gradual public demand for tuberculosis free milk. The dairyman was shown the commercial advantages of having a herd known to be free from disease and also the foolishness as a business proposition of possessing a number of healthy cows exposed to infection from a few tuberculous animals. The intelligent owners soon saw the sound sense involved in the protection of their herds and the most progressive ones of their own accord employed a veterinary surgeon to test their cows. Of course every owner who tested his herd advertised the fact and thus immensely aided in the campaign of education.

When finally the ordinance was presented to the Council, some opposition appeared in the person of one member of the Board of Aldermen. This gentleman, a lawyer of the highest integrity and standing, somehow had escaped the campaign of education and so at his instance the proposed ordinance was laid on the table for a month. The following day the health officer called at his office and on fully explaining the ordinance, the lawyer became at once a strong advocate of the measure and at the next meeting it was carried unanimously. The herd owners were now as eager for the law as the general public, and in some instances more so. For the ordinance contained the rather novel feature that the cows should be tested at a fee not exceeding 25 cents per head. This enabled every owner, large or small, to have his herd tested with little or no expense. The requirement to slaughter a reacting animal or place it in quarantine was no objection on being understood. For this was exactly what any owner would naturally want to do law or no law in order to eliminate danger of infection from his healthy cows.

In almost all cases the animals have been slaughtered rather than quarantined. Slaughtering is encouraged, for then all danger is absolutely avoided and the carcass usually brings a fair price for the cow. The carcass of course may be sold to a butcher subject to inspection by the regulations of the Bureau of Animal Industry. As a rule only the lungs or intestines are infected, these being thrown out the rest of the animal is perfectly safe for food. Only in generalized tuberculosis is the whole animal condemned and even then the hide is good.

The first 1187 cows tested showed 45 reactors or 3.8 per cent. reactors. This does not include about 500 cows which had already been tested for several years and which therefore were practically free from disease. Neither does it include about 500 others which were later tested and which belong to shippers of cream to the creameries for making butter. These last herds with the exception of two or three composed of northern or western cattle were about the same as the 1187 mentioned, but for which I am unable to give exact data owing to the fact that several of the suspects have not been definitely diagnosed. The herds composed of animals brought from northern or western states invariably showed a high per cent. of reactors, a fact of tremendous importance to those wishing to improve their herds by purchase. For example, one splendid looking herd of 72 mostly registered Holsteins recently purchased in New York and Indiana had 51 reactors, or more than all the 1187 native Virginia cows. The owners of this herd went valiantly to work under the advice of government experts and cleaned out by slaughter the entire number of reactors. The cows heavy with calves were quarantined and the calves removed at once on birth, thus avoiding infection from the mother and also a considerable loss.

The figures given in the foregoing paragraph show that now in Virginia is the time to act. A stitch in time saves nine. Our native cattle seem very little infected, but are being infected by importations. The diseased animals should be removed before the infection has spread as it has spread in other States. It also shows the great importance of bringing in the State no animal unless it has been tested by a reliable and skilled veterinarian.

A feature of the Lynchburg ordinance which at first was criticised as impracticable is the low price charged for testing. This I regard as one of the most valuable parts of the ordinance. It enables the owner of the herd to pay for testing and yet no one can call the testing a financial burden. The Bureau of Animal Industry gave the city free tuberculin and record sheets and also furnished an expert veterinarian a part of the time. The city veterinarian gets the 25 cents. Before presenting the ordinance, the city veterinarian was consulted and a salary of $125.00 per month of active work was offered him or 25 cents per head of cows tested. He estimated that at least

2000 cows would be tested making $500.00 and that they could be tested in two months. He therefore decided to accept the 25 cents instead of the salary. The city furnishes ear tags and thermometers.

In closing I will say the whole work has been so far eminently successful. Whatever opposition encountered always disappeared on full understanding, but so thorough had been the educational campaign that there has been practically no opposition. Owners have been eager to have their cows tested and many at distant points have sent in petitions to get on the testing list. The lesson taught is that while testing with tuberculin is of the greatest importance, it should not be undertaken without a previous course in general education. No one can oppose testing if he fully understands the needs.

Operative and Non-Operative Acute Mastoiditis.

By Archibald C. Lewis, M.D., Memphis, Tenn.

In February, 1905, I was an interne in Bellevue Hospital New York. About 3 o'clock one afternoon a violent pain struck me in the left ear. One hour later the drum membrane perforated and the pain was relieved in part. Fortunately for me, Dr. Coakley who was "visiting surgeon" in otology to the Hospital at that time, was called at once and under gas anesthesia did a free paracentisis of the perforated ear drum. To the faultless judgment and painstaking care of this eminent aurist I owe a debt of gratitude I can never repay; I believe that he not only saved my ear but my life as well. This was the beginning of a severe attack of La Grippe which kept me confined to bed for two weeks, during which time I suffered all the pains of an acute mastoiditis and lived in deathly fear of a mastoid operation. My fears were well founded for I had all the symptoms of acute mastoiditis leading to abscess. Temperature running from 102 to 104, profuse muco-purulent discharge from the ear, redness and swelling of the mastoid region accompained with marked tenderness and a constant, severe, aching pain. Two special nurses were put on the case and during the first week the ear was irrigated, alternately with hot boracic acid and bichloride solutions, every two hours both night and day. During this time an ice-cap was kept constantly on the mostoid and even a few minutes without it would cause a renewal of the pain.

Here we have a case of abortion of a mastoid abscess by heroic treatment after the mastoid cells had become infected by the influenza bacillus, notwithstanding the fact that conservative treatment is said to be usually inefective in such cases accompanying influenza.

In the more northern climates middle ear infections are more common than here and a far greater percentage of these lead to mastoiditis. While working in the New York ear clinics in 1905 and 1906 it was nothing unusual to see 3, 4 and 5 mastoid operations a day in one clinic. I naturally became imbued with the idea that mastoid operations would be among the most common I should be called upon to perform in my future practice. This erroneus idea I carried with me to Europe where t took three special courses in operative mastoid work while in Berlin and Vienna.

After developing a keen appetite for anything one naturally likes to gratify it even though it be for mastoid operations. However, that seems to be out of the question in this section of occasion mastoiditis. To illustrate the dearth of mastoid operations here: During the past six years I have worked in a free eye and ear dispensary and never have I seen an acute operative mastoid case develop. For three years I have been on the ear service at the City Hospital, where you would expect a large number of such cases, if anywhere, and there I have operated on just two. In my private practice I see a large number of ear cases but the acute middle ear and mastoid cases will persist in recovering without operative interference. Not infrequently I encounter a subperiosteal abscsss, requiring incision and drainage, and I sometimes do a radical mastoid operation for the relief of a chronic suppurative otitis media, but the acute cases are almost uniformly relieved by palliative treatment

Any middle ear infection is liable to lead to mastoiditis. This danger varies with the character of the invading organism. Abscess formation is much more frequent in middle ear suppurations accompanying the infectious diseases, grippe, diphtheria, scarlet fever, etc., and in these conditions conservative treatment is not so effective, but even here when the patient is seen early and appropriate measures adopted. operation is seldom necessary. Many mastoids are unecsssarily opened, The mastoid cells are infected, and because the operation is comparatively safe and the surgeon anxious io operate, nature and conservative measures are not given a fair chance.

Far be it from me to assert that the operative fee often figures in these premature and unnecessary operations, or that proper treatment is deliberately neglected to further this end. However, I do say that a little neglect of duty in middle ear and mastoid infections will convert a non-operative into

an operation case and incidentally increase the surgeons fee ten-fold. Some surgeons are unscrupulous enough to be influenced by this factor.

The presence of pus in the mastoid antrum and cells does not mean that an operation is necessary. Politzer says: "In every acute middle ear suppuration pus is found in the pneumatic cells of the mastoid process. The presence of pus in the mastoid antrum and cells does not in any way imply that an abscess has formed in the mastoid process." Furthermore, he says that where free communication between the antrum and mastoid cells exists, a mastoid abscess is not apt to form.

Mastoid infection follows middle ear infection. Middle ear infection, when not caused by the infectious diseases, is usually due to the presence of adenoid tissue in the nasopharynx. Even when middle ear infection accompanies an infectious disease, adenoids are oft-times directly responsible for its extension to the tympanic cavity.

The fact that the laity, as well as the profession at large, have been aroused in late years to the danger of adenoids through the lay press and by compulsory physical examination of school children, is in my opinion largely responsible for the decline of mastoiditis and for the decrease in mastoid surgery. The same is true of diseased tonsils and nasal obstructions from other causes than adenoids. These conditions lead often to middle ear infection and are now receiving better attention than ever before.

Infection of the middle ear having occurred, in order to guard against mastoid involvement, ample drainage should always be obtained by free paracentisis of the membranum tympani. This must be done after perforation has taken place, as well as before, where the opening is small or not so situated as to allow perfect drainage. If the pus is thick and tenacious, in order to facilitate drainage the ear should be irrigated at frequent intervals with a hot antiseptic solution, such as bichloride or boracic acid, and a fresh piece of absorbent cotton introduced as often as necessary to absorb the discharge.

A suppurative otitis receiving this treatment in an early stage will seldom develop a mastoiditis.

However, when through neglect, or in spite of prompt and proper treatment, a mastoiditis has developed, the attending surgeon should not be in too great a hurry to operate. Even then these cases will often recover under appropriate treatment. See that free drainage is maintained through the opening in the ear drum, keep the bowels well opened, an ice-cap to the mastoid the greater part of the time for a few days to control the pain and swelling and if the inflammatory symptoms are marked apply leeches freely to the mastoid region.

If these measures fail to relieve the pain and swelling, if the temperature continues high and if there is a bulging of the posterior superior wall of the external auditory canal present, it is best to operate without further delay. The latter symptom is considered almost pathognomonic of mastoid abscess.

Never wait for dangerous symptoms to arise, such as meningeal irritation, chill, facial paralysis, et cetera. It were better to err on the safe side and operate too early, or unnecessarily, than to thus jeopardize the patient's life, exposing him to the perils of sinus thrombosis, meningitis and brain abscess.

By careful consideration and intelligent observation of each and every symptom, together with the exercise of a moderate amount of judgment, it is not usually difficult to determine where palliative measures should cease and operative interference begin.

In our community I believe very few cases of mastoiditis develop in the hands of the otologist. The few that occur are usually found in patients who have neglected themselve or have been neglected at home, and occasionally a case is seen in which the family physician's palliative measures have been insufficient or too long continued.

In making this defence of the mastoid it is with the honest conviction that there is a lack of appreciation of the value of conservative treatment in mastoiditis and that it often suffers unwarranted attack.

However, after all is said, it simply narrows down to a question of conscientious duty. This is fulfilled when the aurist has given his patient the benefit of a thorough knowledge of such conditions, together with his best judgment in handling this particular case. Furthermore, he should remember that the sins of omission are at times more grievous than those of commission and when in serious doubt take the straight and narrow way which leads to safety and operate at once.

Exchange Building.

The More Rational Methods of Treating Aural Diseases.*

By Dunbar Roy, M.D, Atlanta, Ga., Professor Rhino-Laryngology in Atlanta Medical College; Member of American Ophthalmological Society; American Laryngological Society; American Laryngologieal, Rhinological and Otological Society, etc.

This paper is brought for your consideration because otologists of today are too prone to diagnose aural diseases without sufficient thoroughness in their examination and to use treatment which has been handed down to them by men of past generations. This statement is made in no wise as indicating that the writer is free from such criticisms himself but is made because he recognizes the value of some of the newer methods which have given results much superior to those which have long been used. In considering this subject I realize that the large majority of my hearers are general practitioners who cannot keep informed of all the advances made in the specialties of medicine, so that some practical remarks along this line I am sure would not be amiss.

1. *Acute Conditions of the Middle Ear.* The fact that acute inflammations of the middle ear are not so frequent in the South as they are in the North would lead one to the realization of the fact that the treatment of such conditions would be much more successful by the use of mild measures than by those of a more radical type as we hear advocated in the various text books on otology which have all been written by Northern men. Just in the same manner, only Southern practitioners are capable to write intelligently on fevers and various other diseases which are indigenous to our Southern climate.

There are two distinct types of acute inflammation of the middle ear. (a) Acute catarrhal, the ordinary earache of children in the winter, accompanied by and more or less dependent upon the presence of enlarged tonsils and adenoids with their attendant catarrhal rhinitis. (b) Acute suppurative, where the middle ear is overwhelmed by the presence of pus-producing organisms and where nothing short of a punctured drum membrane will give relief.

(a) In this variety much can be accomplished by judicious treatment, which in many cases will save the patient from suffering and prevent the condition from passing over to the suppurative variety. Frequent earaches in children, which occur at night and which disappear with the coming of the morrow only to return again the next night following an exposure to the cold and out-door play in the face of the first night's experience, are largely due to the tonsil and adenoid condition. In such cases their management is perfectly obvious which must consist in a thorough removal of the adenoids and tonsils. If on the second night the earache is more intense, and especially if there is a rise in temperature accompanied by some bulging of the membrana tympani, there is but one way to proceed, and that is the free puncture of the membrane and the placing in the canal of sterile wads of cotton to be changed as such becomes saturated with the serous fluid. I do not advocate the syringing of the ear unless the discharge becomes thickly mucous and the pain after the puncture still continues. Under such circumstances hot saline irrigations are most beneficial, otherwise only the cotton tampons are used in the canal and changed as necessity demands. The old idea that the puncture of the membrana tympani destroys the hearing in that ear is fortunately disappearing and if physicians would realize that an early puncture, when necessary, frequently saves the hearing, then many an ear would be free from further pathological condition. The management of acute inflammation of the middle ear in the adult differs from that employed in children. The inflammation in both cases usually starts from the same point, i.e., an extension from the nasopharynx through the eustachian tube into the middle ear. In children, however, there is usually the attendant blocking of the nasal cavities with a large amount of mucous which, in the presence of at least some adenoid tissue in the nasopharynx, materially interferes with a proper drainage of the eustachian tube. In adults the nasal chambers are larger developed, as also the nasopharynx, and the patient has the additional advantage of being able to expel the mucous, both by blowing the nose and by expectoration. For this reason an acute inflammation of the middle ear in children is moch more likely to be accompanied by an exudate which will require evacuation through the drum membrane, either surgically or by nature, than the same occurring in the adult.

During the last six years, the writer has been able in at least 90% of the cases of acute inflammation of the tube and middle ear which have come to him for treatment to abort the inflammation, thus preventing additional weeks of treatment on account of a mucous or muco-purulent discharge through the drum membrane.

About three years ago Dr. Yankauer, of New York, began to advocate the treatment of inflammatory conditions of the tube

*Read before Medical Association of Georgia in Atlanta, April 15-17, 1914.

and middle ear by the topical applications of astringents to the inside of the tube with small cotton applicators passed into the mouth of the tube. For several years before the writer had used this same method but had failed to publish the same. At that time I used number four piano wire, simply preparing the end so as to wrap thereon a small pledget of cotton which could be saturated with the medicine desired and passed through the catheter into the eustachian tube. Dr. Yankauer has had devised some special corrugated wire which is quite an advancement over my own crude method, and which materially aids the technique of this treatment. This method of treatment is applicable during the first 24 hours of the acute inflammation and is not near so efficacious after that period, and yet I have used it even then with some success. If an adult patient comes to me complaining of having suffered with pain the night previous in his ear and if on examination I find the drum membrane red, especially along the manubrium, showing an acute inflammation of the middle ear and tube, I immediately make a thorough application of nitrate of silver (20 grains to ℥) to the inside of the eustachian tube by means of the cotton applicator. This of course is not done until the nasal cavities and naso-pharynx are thoroughly cleansed of all mucous and the floor of the nose has been shrunk with a mild cocaine solution.

Before the introduction of the nasopharyngoscope this procedure was accomplished entirely by touch, but now since the introduction of that instrument we can look directly into the mouth of the tube and make any manipulations we desire. In acute conditions of the eustachian tube such applications are invaluable and far supersedes the old method of blindly mopping the nasopharynx. With the introduction of the Holmes nasopharyngoscope we are now able to examine every part of the postnasal space and even obtain a comparatively clear view into the mouth of the eustachian tube and there recognize pathological conditions which previously remained unseen. The nasopharyngoscope is constructed along the lines of the urethroscope, and those of you who are familiar with this latter instrument will readily understand the mechanism of the former. The pharyngoscope is passed through one nostril into the nasopharynx and the eustachian catheter through the other side, so that while looking through the scope one may readily manipulate the instrument on the other side, thus keeping the parts under direct observation.

Another instrument which I have used with great success during the last four years is the aural suction glass for forcing the secretion from the middle ear into the auditory canal through an opening in the drum membrane. I am sure that several of my cases of acute middle ear inflammation have been saved from a serious mastoid involvement by the use os this instrument. We all know that the great trouble in a mucopurulent inflammation of the middle ear is to keep the opening in the drum patulous after it has been incised, so as to allow and aid a free flow of the secretion into the auditory canal and prevent it from damming back into the mastoid cells. With this instrument such strong suction can be made that the secretion can readily be emptied out of the middle ear into the canal through the drum opening and this repeated often enough to insure good drainage throughout the course of the disease. Siegel's pneumatic speculum can be used in the same way but the instrumenl here shown I consider more acceptable.

2. *Chronic Couditions of the Middle Ear.* In the treatment of a chronic discharge from the middle ear, whether mucoid or purulent, I can offer very little in the way of advanced treatment which is superior to that advocated by me in a paper read before this association several years ago. The fact is certainly most evident that discharging ears are not near so frequent now as they were ten years ago, and this I attribute to physicians realizing the importance of the presence of adenoids and diseased tonsils in the production of this condition and the almost universal method of treatment by the surgical removal of the same. This one fact alone would show the importance of removing adenoid vegetations and diseased tonsils.

In progressive deafness due to the so-called dry catarrh of the middle ear we must even yet admit that it remains one of the dark pages in otologicat literature. On the other hand I am convinced that much can be done by rational treatment after a most thorough examination has been made.

It is unfortunate that the term "dry catarrhal deafness" was ever used as descriptive of this condition, for in the ordinary sense in which the term catarrh is understood this class of patients are usually free from such a pathological process. It is also unfortunate that so many physicians consider a stenosis of the eustachian tube as the chief factor in producing deafness in this class of cases, for otologists well know that a patuleus tube is almost as frequently found as one of stenosis.

However, that such a stenosis is frequently a marked symptom in these cases we must admit, and we must also recognize the fact that simple inflation will not al-

ways produce a patulous condition. If such fails then we have recourse to the eustachian bougies. Several years ago I used the metallic bougies with electrolysis and published at that time my results with this line of treatment. I have now abandoned this method and use only the ordinary whale bone bougies. When used in the right cases and with a delicacy of touch which is absolutely necessary, this is a valuable adjuvant to our other lines of treatment. Such, however, should only be used under direct ocular inspection through the nasopharyngoscope. This latter instrument now enables us to do by sight that which before had to be done by the sense of touch. Unless one possesses the *tactus eriditus* the use of these bougies may be attended with considerable injury to the tube's mucous membrane and if inflation is inadvertently made directly afterwards an emphysema of considerable proportions is liable to occur. The old idea also that all cases of catarrhal deafness had their origin from the nasopharynx is fallacious, for it is well known that in the majority of cases the nasopharynx itself shows but few pathological changes. This of course does not apply to those cases in the young where there is present a bunch of adenoid tissue in this region and where its removal will usually be followed by a betterment and in most cases a restoration of the hearing.

I am afraid that too many of us are not sufficiently thorough in our examination of this class of patients and frequently give a mistaken prognosis. The differentiation of cases of otosclerosis from the ordinary cases of progressive catarrhal deafness is today most important not from a therapeutic standpoint so much as from our ability to give the patient an intelligent prognosis. The fact that middle ear inflation is so often used without a proper determination of why it is used has lead to the general belief that this method of treatment is without value. It is impossible for me within the limited scope of this paper to discuss the differential diagnosis between a diseased condition of the sound perception and that of the conduction apparatus, realizing, however, that all aural treatment must be adopted according to this determination.

In cases of otosclerosis or spongification of the labyrinth capsule and bone it is useless to force a patient to a long treatment directed to the nose and throat with the inflation of the middle ear. We know now that such treatment is practically useless, but on the other hand we must treat these cases by internal medication which will aid nature in stopping this pathologic process or at least fortify the constitution against its too rapid progress. This is of course difficult to accomplish, and yet some good can be done along rational and intelligent lines.

In that class of progressive deafness where the bone conduction is good but the air conduction bad, where inflation of the middle ear increases somewhat the area of hearing, where the patient is strong and vigorous and has not passed the age of 30, where there is no history of hereditary deafness, then in such cases I believe that some good can be accomplished. However, it cannot be accomplished simply by sprays and the inflation of the ears by the Politzer or Valvava methods. The nasopharynx and the mouth of the eustachian tube must be inspected with the pharyngoscope and these parts treated as the necessity demands. The old methods of swabbing the nasopharynx with astringents, especially the nitrate of silver, is unscientific. This was done in hopes that some of the astringent effect would reach the mucous membrane of the eustachian tube. Now, however, we get this effect by placing the medicine directly on the diseased parts, either by means of the delicate wire swabs or dropping the liquid in the catheter and with compressed air forcing the same even into the middle ear. Many of you have no doubt seen these cases which I call subacute otitis media. Such conditions follow a bad cold in the head and the eustachian tube remains stopped and there are symptoms of blubberings in the ear. This is due to mucous in the eustachian tube. Before topical applications can be made it is my rule to apply suction through the catheter and draw this tenacious mucous out. It is surprising how much of this secretion can be drawn out. Afterwards topical applications and inflations will much more readily bring about a resolution.

I am firmly convinced that in the use of the eustachian catheter we have the only rational method of inflating and treating the middle ear. Why should we inflate both ears if only one is affected, and this we must do if we use the Politzer bag. Then again with the catheter we can use compressed air with a definite pressure which is the only scientific method to use. Also the catheter is introduced under direct observation by means of the pharyngoscope so that one can use medicated liquids, cotton applications or bougies, and at the same time know that they are reaching the right spot. The mucous membrane of the eustachian tube and middle ear must be treated, and in no other way can you put medicaments on these parts except by the use of the catheter. Just what is the pathology of this form of progressive deafness is still in obscurity, but I am firmly convinced that

we shall have to forsake the old idea that it has its origin in the nose and throat and look for some inherent changes in the structures of the ear proper. Much can be accomplished by the internist when there exists the so-called intestinal toxemia and its allied conditions, and he is the best otologist who remembers that the ear is not a distract entity from the rest of the human anatomy. If patients could receive thorough and proper treatment at intervals of at least twice during the year for a long period, I am sure there would be many cases of progressive deafness which would not only receive some benefit from the treatment but who would stand a good chance of having an arrest made in the progress of the disease.

Grand Opera House.

Inguinal Hernia.*

By W. B. Russell, B.S., M.D., Surgeon in charge of The Jackson Infirmary, formerly Surgeon to Nanking Hospital, and Clinical Professor of Surgery to East China Union Medical College, etc.

In bringing the subject of inguinal hernia before you at this time it is not with the idea or hope of presenting anything new upon the subject, but to emphasize and draw out discussion on some familiar aspects our observation and experience have impressed on us as important. Is it not true that large numbers of our general practitioners are still prescribing or allowing the druggist to prescribe the truss for their hernia cases instead of operation. The weakened and calloused condition of the tissues found at operation in old truss treated cases, we believe, should teach that inguinal hernia is surgical and should be treated by early radical operation.

We do not need to go into the varieties of inguinal hernia, whether direct or indirect, congenital or acquired, etc., for all varieties are amenable to surgical treatment in competent hands. When first visiting the Mayo Clinic several years ago we heard Dr. Judd quote their statistics on their inguinal hernia work in which he compared their final results with the various operative proceedure. At that time they reported a considerably larger percentage of permanent results with the Bassini, even in their worst cases, than with any of the other operations in their best cases. As a result we received a strong predilection for the Bassini proceedure of operation which we later found satisfactory in the large herniae so often seen in our work in China. Indeed, we can strongly recommend it in all varieties as giving the smallest percentage of recurrences.

Our proceedure has been to give cases careful preliminary preparation, except of course in strangulated cases, by emptying the intestinal tract thoroughly with oil 24 or better 48 hours before operation and enema on morning of operation, and in the case of extremely large herniae several days of rest in bed with light diet and strong elimination with Epsom salts, etc. Otherwise, the large hernial contents, at time of operation, may be found to have forfeited "its right of domicile." Before bringing the patient to the operating room the field of operation is simply shaved, and on the table our method was formerly to sponge the field off thoroughly with alcohol, allow to dry, and paint with the pure Tr. of iodine, but since our last visit to the Mayo Clinic we have been partial to the method of Dr. Bastianelli of Rome, which they now follow in their clinic at Rochester. This consists of shaving the field of operation as above and on operating table sponge first with a solution of 1-1000 iodine crystals in benzine, allow to dry, and follow with the pure tincture, or as they do the tincture of iodine diluted with an equal volume of alcohol. This method is especially adapted to the emergency strangulated case, as it consumes little time and is reliable. The patient, under a general anesthetic if he is able to take it or if not H-M-C. hypodermically with local anesthetic, novocaine, etc., is covered with sterile sheets and the field of operation surrounded with sterile towels held in place by towel forceps. We operate with gloved hands and with the smallest number of assistants, usually one, as my instruments and sponges are on stand swinging over the patient's limbs, so in easy reach. All sponges, dressings, towels, etc., are sterilized, wrapped in small separate packages that can be opened and given to us by the general nurse at any time without danger of contamination.

Incision is usually made as in Bassini's operation through skin and superficial fascia, next being careful to get landmarks of external ring when a grove director is passed up under the external oblique and its fibres slit open with a sharp knife to above the internal ring. Now the coverings of the hernial sac are opened, the sac isolated at the internal ring, separated from the cord, unless hernia is congenital, when sac is divided above the testicle and treated after the manner of Maaewen and opened, contents attended to as condition indicates and reduced. The sac is now ligated as high up as possible, and unless there still seems to be some pouching of the stump is

*Read before Tennessee State Medical Association meeting April 8, 1914.

left, but in the latter condition it is managed somewhat similar to Macewan's method. The cord is now displaced (round ligament in female) and the internal oblique, transversalis, and if necessary a part of the rectus abdominis sheath are sutured to the shelving portion of Pupart's with interrupted chromic catgut from above down and tied from below up, putting an extra stitch above cord as new internal ring. The cord is placed in its new bed, external oblique closed, usually with running chromic catgut, and skin and superficial fascia with interrupted silkworm-gut, wound painted with iodine and covered with sterile gauze held in place by strong adhesive straps so applied as to prevent tension on wound. In bed patient is allowed to turn on side or raised up to void urine. Sutures are removed on eighth day and patient usually leaves hospital in ten days to two weeks, but a spica dressing making pressure over sight of operation is worn for two or three weeks longer and patient is carefully instructed not to do any heavy lifting for six months. Use of truss is prohibited.

In conclusion: 1st. We would urge the physician in general practice to strongly recommend early operation in all inguinal hernia cases and explain to their patients carefully the evils of wearing a truss.

2nd. Careful preliminary preparation before operation in all cases where possible, and especially in large herniæ as essential to success.

3rd. Cases where a general anesthetic is not possible or advisable may be successfully operated by use of local anesthetic, e.g., novocaine, with H-M-C., with or without heart stimulant hypodermically.

4th. We recommend the Bassini principle of operative proceedure as giving splendid results, especially in the large herniæ, with smallest possible percentage of recurrences:

Office: Corner Market and LaFayette Streets, Jackson, Tenn.

The Mother and the Child, From a Public Health Point of View.

By C. W. Stiles, Wilmington, N. C., Professor of Zoology, U. S. Public Health Service.

Have you ever stood beside the sick bed of a babe or of a child and tried to picture to yourself what that patient's life had cost its mother in anxiety, suffering, risk, care, and work?

Have you ever stood beside the death bed of a babe or of a child and tried to picture to yourself what that person's death had cost its mother in sorrow, suffering, anguish, in a feeling of goneness and hopelessness?

I believe it to be generally the case that when we see a sick boy or girl we are likely to say to ourselves "Poor little child," and that we are altogether too prone to overlook the fact that the case of illness we are observing is causing more suffering and anxiety to the mother than to the child, and that considering all the maternal efforts, care, anxiety, suffering, work, etc., that have been connected with the child up to the moment we see it seriously ill, that illness really means more to the mother than it does to the child.

Likewise, if the child dies, the mother has received a blow that is in reality more telling than the blow received by the son or daughter. Of course, the child, in passing away, has lost all possible opportunity for further education, play, success, etc., and all danger of uncertainty, suffering, sorrow, care, and hardship. It is opportunity the child has lost, rather than something of more certain nature, and the child in dying really is not conscious of what it is losing; therefore, death is scarcely a hardship, to the child.

To the mother, however, the death of the child is an actual and serious hardship. It means not only sorrow, grief, an indescribable feeling of "goneness" that comes over us when death takes our loved ones, but more besides: That death means an actual waste in the maternal efforts of that mother; it means that part of her natural sufferings have been incurred more or less uselessly; that part of her life, though lived, has been wasted.

Do you catch the point I am trying to make? Carried to ils logical conclusion this thought would really mean that your life or my life is not so important to you or to me as it is to those who have suffered for us, and that the life of any person means in reality more to that person's mother than to himself.

This may perhaps be a somewhat unusual point of view, but it seems to me to have some actual foundation in fact, although perhaps I have not stated it so clearly as some one else might have done. What I really wish to accomplish by bringing the thought forward is to lead you to think of the unnecersary 620,000 deaths per year in the United States in terms of motherhood, from the point of view of the mother and in connection with the brutal injustice to the American women that these unnecessary deaths involve.

In public addresses as well as in private conversation, I have often maintained that American women do not receive so great a protection, in reference to their life, health, and happiness, as do the women in certain countries of Europe. I agree with you that it is just a little shocking to have an American born citizen reach this conclusion, but

a period of about eight years residence in Europe has forced the belief upon me.

It is true that in certain respects the average American husband is much more considerate of his wife than is the average German, French, or English husband. But it is equally true that when it comes to actual safeguards that are thrown around the life and health of the children, the United States must take a back seat when compared with England, France, Germany, and Switzerland, and since it is chiefly the mother who suffers in case her child is sick or dies, I cannot escape the conclusion that our country does not protect its women from unnecessary suffering and death so well as do certain countries of Europe.

Let me give a somewhat unusual and extreme example: I recall very well an incident that occurred when I was living in Europe; a nurse girl had care of her young charge when the child swallowed a spool and choked to death. The nurse was arrested and sent to prison for criminal carelessness. In the eyes of the law, it was the duty of the nurse to see that the child did not swallow spools or anything else it should not swallow, and since the child died because the nurse did not carry out the duty that devolved upon her and for which she was paid, the death of the child was due to the criminal carelessness of the nurse and the law took charge of the case.

The Law protected human life; it protected the lives of children against the carelessness of thoughtless nurses, and as European laws are enforced better than our laws are, it behooved nurses to be careful.

That particular child had cost its mother nine months of anxiety, a few hours of intense suffering, a period of invalidism, a year or so of convalescence, days and nights of care. The Law protected these maternal efforts and punished the nurse whose carelessness rendered these efforts futile.

Let us turn for a moment to our own country—not in a spirit of fault-finding, not in a spirit of carping, dyspeptic, and useless criticism, but in a spirit of fairness to American women.

Suppose that a nurse in—well, say here in North Carolina, had charge of a baby, permitted the child to swallow a spool, and suppose as a result the child died. What would happen? Would the law punish that servant as a warning to other nurses to protect the lives of North Carolina babies? You are amused at the question despite the serious subject involved. Think over this matter carefully: That North Carolina baby has cost its mother the same amount of anxiety, care, suffering, invalidism, convalescence, and other similar maternal efforts that the German baby cost its mother. Does the State of North Carolina give to the North Carolina women the same protection that Prussia gives to its women, against a wastefulness of maternal effort when that wastefulness is due to carelessness on the part of nurses?

Let us leave the accidental and exceptional death due to swallowing the spool and turn to a more common cause of death; let us leave the nurse girl and turn to the father. In how far does he do what can be reasonably expected of him in protecting the child from infection and in safeguarding the maternal efforts of his wife?

Not long ago I was talking to an American father who has worldly goods worth at least $100,000. Incidentally he is also well supplied with children. whom he daily exposes to the dangers involved in having at his home an ordinary surface privy, open in back, with a sanitary value of ten on a scale of one hundred. The point this man emphasized in his conversation with me was that he thought every woman should have eight or ten children.

Now, frankly, my friends, what encouragement is there to this man's wife to bear him children, when he exhibits so little interest in keeping them alive and healthy and in conserving the maternal efforts of his wife that he subjects both the children and their mother to the dangers involved in a type of sanitation with an efficiency of only ten on a scale of one hundred? Poverty cannot be pleaded as an excuse in this case, for the man has property worth not a cent less than $100,000, and it would not cost him over $15 to change the sanitation of his yard from ten to seventy-five or one hundred on a scale of one hundred. Ignorance cannot be pleaded as an excuse, for he is not an uneducated man and he has been warned about the sanitation under which his children are living. What is the explanation in this case?

My reply to this question is this: This particular man is a fair sample of the average American father; despite the fact that he would be willing to make any sacrifice to restore to health either his wife or any one of his children if he saw that they were seriously ill, he in common with the average American father is not sufficiently interested in keeping his family well to take ordinary precautions for this purpose unless the law forces him to do so; without murmur, he would pay a bill of several hundred dollars for physicians and trained nurses, if typhoid fever were actually present in his family, but he would consider it financial foolishness or the unwarranted interference of a theorist if he were urged to expend $15 in making his privy less insanitary, as a precautionary measure against typhoid.

Are you surprised at this interpretation? And do you think I am rather uncomplimentary to American men? Frankly, my friends, when one discusses the sanitary precautions with which the average American father voluntarily surrounds his wife and children, it is necessary to be either uncomplimentary or untruthful. Frankly, my friends, I know too well the average American father, with his lack of interest in protecting his wife and children against disease, to have much respect for him from this point of view.

Do you reply that this public meeting is evidence that my view is incorrect? If this thought is in your mind, you are treading on a very slippery argument, for it was not the average, but the exceptional husband who was interested in holding this public session; it is not the average American but the exceptional American who, like Mr. Whorton, has been carrying on the campaign here for better health; further, also, Guilford county by her forward movement in public health matters has demonstrated that this is not an *average* American county; but one far above the average.

Think of it! Guilford county was one of the very first in the entire South to introduce that logical and splendid system of health work known as the "full time health officer" system.

Ladies, permit me to invite your very serious attention to the fact that there are only about ten or twelve counties in this State where the woman and the children receive an amount of health protection even partially comparable to that which you and your children are receiving, and permit me also to invite your attention to the fact that owing to the efforts of Doctor Rankin, Secretary of the State Board of Health, the North Carolina women and children are being protected by a greater number of full time health officers than are the women and children of any other State in the entire South.

And yet, despite the fact that North Caro lina is leading the entire South in the development of the full time county health officer, let us recall that the health protection given to the women and children of this State cannot be compared with the safeguards thrown around the women and children of Germany.

Fourth of July orators take great pride in pointing out the patriotism of American men, and they refer in glowing terms to the bravery of American soldiers on the battle field.

This kind of oratory has, of course, its place, and probably does considerable good. But somehow, I cannot help feeling that there is a type of patriotism that is higher and nobler than that which results in killing the men of other nations or being killed by them. I refer to the patriotism that will lead men to protect the women of their own country from all unnecessary sickness and suffering, unnecessary sorrow and worry, unnecessary and premature death. A type of patriotism that will lead the average father to think of the constant danger to his wife and babe that is involved in surface privies and in promiscuous spitting.

A type of patriotism that will lead the average father to recall what the babe really means to the mother, what sacrifices it has cost her, and that one of his highest duties lies in safeguarding that mother against unnecessary sickness of every kind.

The point naturally arises in your minds, just what are the most important lines of work for us to follow out in order to give to our women and children the greatest possible amount of protection against unnecessary disease?

To discuss this subject in detail would take more time than is possible in a short address. You will therefore pardon me if I merely indicate certain of the more essential points.

First of all I place the proper organization of local health forces, and under this heading I wish to emphasize the point that the full time health officer system is the one best adapted to our needs in the South. While proud of the work the Federal Government is doing, and while admiring the activity of the Southern States Boards of Health, I want to emphasize the point that the local unit, such as a county, is the real firing line in this work and that the full time county health officer is the man upon whom the real work will fall of protecting the health of the women and children of any county, and that no county without a full time health officer is just or can be just to the women.

The second point I would emphasize is the necessity for greater harmony along public health lines. For God's sake, gentlemen, let us take human life out of politics! Any locality which permits the health and life of its women and children to become a matter of political barter, is not entitled to be considered as capable of self-government.

A third point I would stress is this: As the public health of the separate States makes up the health of the Union, and as the public health of the separate counties makes up the health of the State, so the health of the family makes up the public health of the county. Therefore, the quickest way for us to make any county the healthiest and most sanitary county in a State, is for every family in that county to make its own home and environment the

healthiest and most sanitary in the county, and just as soon as every family will do this in any county, that county will lead the State and the Union in the health conditions.

As a fourth point I would mention the medical inspection of public schools. It is rather dangerous for me to start on this subject, for if once fairly started I am likely to talk all night. In brief, permit me to say that many a child is backward in school, is backward in development both physical and mental, simply because his parents have not had him properly examined. The parents may know that he is stupid, but do not suspect that he is really sick, although he may not happen to have a fever, the colic, or a fit.

There is a fifth point which is a big subject to handle. It is almost impossible to discuss it without bringing down upon oneself a storm of criticism from one source or another. As I have become more or less accustomed to rough weather of this kind, and as the breezes that have occasionally cycloned in my direction have rendered me more or less pachydermic, I am going to refer to it briefly in closing. The point is this: Here in the South we are living under unusual race conditions. You may perhaps agree with me that these racial conditions are biologically paradoxical, that they are contrary to nature, and that they cannot last indefinitely, or you may consider me a crank, an extremist, a theorist, or any other sort of a thing with his pet slobbering imbecilities; we can at least agree in a most friendly way that these racial conditions actually do exist. To be brief, agreeing with you that they do exist and that your wife and child and my wife and child must live under them, I wish to maintain that it is in the interest of the health and therefore of the happiness of the men, women, and children of both races to carry out the plan of race segregation. And if you reply to me that the idea of race segregation is based upon race prejudice against the negro, my reply is that if you think it unjust to segregate the negro, I propose that as a health measure to protect the negroes against the diseases of the white race, we should segregate the whites.

As I see the public health problems of the South, they are intimately interwoven with the race problem, and as one of the most important public health steps to be taken, I view a segregation of the races.

Report of Interesting Cases.

By Dr. John Hill Tucker, Charlotte, N. C.

There are many causes of chronic and persistent coughs. Recently two most interesting cases came under our observation in the office, which I feel should be reported.

First. Mrs. L., age sixty (60). Seen for the first time on May 5th, 1913. For more than a year she had suffered greatly from a persistent and severe cough. She had been treated, with a diagnosis of chronic bronchitis, without noticeable improvement. She really came to see me to have her glasses changed, as she expressed it.

Noticing that she was deaf, I suggested that she let me look at her ears. In each attempt to introduce the ear speculum in the right ear a paroxysm of coughing was brought on. A hard mass of black wax was found imbedded in the external auditory canal apparently touching the drum. The skin of the canal was red and inflamed almost to the point of ulceration. The canal was irrigated with a warm saline solution until the wax was softened and removed. An applicator with cotton touching the inflamed canal would produce at once a paroxysm of coughing. The patient upon being closely questioned said that she had noticed that her ear sometimes itched and in rubbing it she was always made to cough. At any event the local condition was treated and the cough disappeared. The patient was seen four months later and reported that the cough from the removal of the wax had gradually subsided until within three weeks she was well of a condition which had been most annoying for more than a year.

Second. The other case was in a patient sixty-five (65) years old, who came to the office on August 10, 1913, complaining of being hard of hearing. In the left external auditory canal there appeared to be an eczema. When the applicator was used the patient coughed violently. He reported that he had noticed this condition for the past year or more, that whenever an attempt was made to scratch the skin in the canal of the ear, he was made to cough.

Both of these cases are beautiful illustrations of the well known fact that irritations of the external auditory canal will produce a reflex cough through the auricular nerve, sometimes called Arnold's nerve, which has its origin from the ganglion of the root of the vagus receiving a branch from the petrous ganglion of the glosso-pharyngeal nerve. This nerve supplies the external auditory canal with the branches.

The progressive, up-to date practitioner is now advising his patients to use Citrolax instead of the bitter salts or the ordinary purgatives. One tablet dissolved in a glass of water gives a pleasant, effervescing

drink—tastes like Lemonade and is effective. By mentioning the Charlotte Medical Journal, Foley & Company, Chicago, Illinois, will send you liberal samples for your personal use and office dispensing.

The Merry Heart.

The beneficial effects of keeping up the spirits of a patient who is wont to become depressed is well known. In fact, "to exhilarate the heart," says Burton, "has been the practice of every age and country as the best means of preserving life." Regarded as a psychological state, laughter has been thought to be merely the expression of the overflow of nervous energy, but this shows itself in many other ways than in visible mirth. Accordins to Dr. W. McDougall, of Oxford, who read a thoughtful paper upon the subject, laughter is Nature's protection against the depression effect upon the system of our sympathetic tendencies. It may seem very ill-timed, but most of as manifest a desire to laugh when we see a person falldown, for instauce. Our kindlier feelings, however, soon prevail and, controlling our risorials, musicles as best we can, we hurry to the spot to render assistance. Probably, if we did not give vent to our first impulse, the "nseless minor sympathetic pains," referred to by Dr. McDougall, would become too much for us, and the length of our faces would daily increase. Medical men ought, therefore, to be the cheeriest of all people and the most readily moved to laughter. But it is because of the changed direction of mental outlook indeed by cheerfulness and mirth which interact powerfully even upon physical conditions that a "merry heart doeth good like medicine." The old saying of Marsis lius Ficinus—"for without mirth physic is of no force"—may be heartily commended to the notice of all medical practitioners as well as psychologists.—Canadian Practitioner and Review.

Fake Consumption Cures.

In a bulletin issued by the National Association for the Study and Prevention of Tuberculosis in U. S. America, there is mentioned that over 500 fraudulent cures for consumption were advertised.

Three kinds of consumption cure frauds are distinguished by the Association, the first being the "institute" fraud, where a pseudo-hospital or dispensary is established and the wily "doctor" or "professor" administers "treatments" at so much per head. These concerns also carry on a mail order business with profit. The second group of cures contains over a hundrd different kinds of drugs and "patent" devices, and of which may be purchased at a drug store. Usually the consumptive is charged from $1.00 (Rs. 3-2-0) to $5.00 (Rs. 15-6-0) for these and the institute "cures," when he could make them up himself in exactly the same form for from one to five cents (2 pice to 10 pices).

The third group of "cures" includes homemade remedies, which certain self-deluded individuals believe will cure tuberculosis. Among them are such things as onions, lemons, coal smoke, pig's blood, alcohol, dog oil, teas of various kinds, and a variety of diets, including goat's meat clabbered milk and a score of other articles. These are not usually advertised for profit, but are usually given publicity in various ways.

The consumptive is the most hopeful individual in existence when the question of a cure is suggested. The National Association has stated that no specific cure for tuberculosis has been discovered, except the well-tried hygienic-dietetic method of fresh air, rest and good food.—Public health Journal.

The Disposal of Domestic Sputum.

Banks calls attention to the danger attached to recommending phthisical patients to spit or pour the contents of the sputum into the fire, When a few ounces of such sputum is poured on to a fire, there is a hiss and a small cloud of ash is thrown up. Some of the sputum is destroyed, but most in little ball between the glowing cinders into the ashes-pan beneath. This is not easily seen, being covered by a fine ash, and is rapidly dried. Naturally there is, in consequence grave danger to whoever cleans out the heart.—Australasian Medical Gazette.

Case of Toxic Polyneuritis Due the Virus of Poliomyelitis.

Batten reports the case of a man, aged 20, who had an acute attack of "influenza" in August, 1898, when aged 5. This was followed by paralysis, and he was in the Children's Hospital, Great Ormond Street, suffering from a condition which was variously diagnosed as peripheral neuritis and poliomyelitis. Pain and tenderness were a marked feature of his illness, but he never had any loss of sensation. The boy slowly recovered, and now, fifteen years after the illness, presents a dwarfed appearance, being only 4 ft. 2 in. in height. He has a marked lateral curavature of the back, a general wasted condition of the legs and arms, but with no such local wasting of muscles as is commonly seen in most cases of poliomyelitis.—Proceedings of the Royal Society of Medicine.

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CHARLOTTE, N. C.

U. S. PUBLIC HEALTH SERVICE PELLAGRA HOSPITAL LOCATED AT SPARTANBURG, S. C.

The recently passed urgent deficiency bill of Congress carries with it an appropriation of $47,000 for the establishment of a pellagra hospital at Spartanburg, S. C. This hospital will be wholly controlled and operated by officials of the U. S. Public Health Service, and while situated in the same community as the Thompson-McFadden Pellagra Hospital will have no official connection with it. Passed Assistant Surgeon R. A. Herring of the U. S. Public Health Service will be in charge, assisted by Prof. Carl Voeglin of the Pharmacological Department at Washington, D. C. In addition the services of four technical laboratory workers will be used. In addition to the direct appropriation of $47,000 for the work of the hospital additional amounts may be drawn from other funds of the department to the extent of making a total of $75,000 for the pellagra investigation under this management. It is announced that at this time special study will be along chemical lines, and while patients may be received from any portion of the South, only a carefully selected limited number will be cared for in the institution. The hospital will be opened about June 1st, 1914, and its work, it is expected, will be continued until definite etiological factors have been conclusively established.

A LEGAL NATIONAL LICENSING BOARD.

Several times during recent years this Journal has referred editorially to this subject in its various phases. Whether Congress has the constitutional right to enact a law bearing upon the control of medical education and the different licensing boards is still a question of debate, and one that has been recently discussed in several medical journals. If Congress could be persuaded to enact such a law, it certainly would meet the approval of almost the entire medical profession of this country. If Congress has not the right, it ought to have. The Supreme Court of the United States, as we understand it, is of the opinion that a national liquor law is constitutional, and also the pure food law, which comes under Federal control. If this be the case, it occurs to the writer that it would have the same jurisdiction over the different licensing boards in the different States.

If Congress has not the inclination to enact such a law, or if it has not the power to do so, there is another method by which practically the same good can be accomplished. That is through the American Association of Medical Examining Boards. This association, it seems to the writer, could easily get together and formulate rules and regulations that would be national in scope, and would very nearly approach uniformity in the different sections of the country.

It is difficult to understand why legislative bodies, and even the Congress of the United States, are prejudiced against enacting laws regulating the practice of medicine or coining plans that tend to build up the standard of medical education, or the practice of medicine and surgery. Such, however, is the case. Few members of legislative bodies can be made to look at the subject as a well informed physician looks at it. They think that every suggestion along this line, made by physicians, is selfish in character. To get an enactment to regulate even the sanitary condition of a city, or a county, or a State is, as a rule, quite difficult. There is always a great deal of opposition.

THYROID ELIMINATED FROM OUR ARMY AND NAVY.

The following clipping from the annua report of the Surgeon General is a very strong argument in favor of anti-typhoid vaccination:

"The army got through the year 1913 with only two cases of typhoid fever in the enlisted strength of more than eighty thousand officers and men, One was that of a man who had not been immunized with the typhoid vaccine, and was believed to have contracted the fever before he enlisted; the other case was among the troops in China, and though the man was immunized in 1911, the history of the case is in doubt.

The navy, which adopted the vaccine later than the army, and did not make its use at once compulsory, had among its fifty thousand jackies only seven authentic cases of typhoid in the year ending last June. Four of those were treated at a remote tropical station, where the vaccine had deteriorated.

Such is the wonderful record of the prophylactic treatment, wnich has wiped out one scourge among the nation's defenders and which medical officers believe has had

something to do with decreasing the rate of tuberculosis.

Under the direction of Surgeon General Blue, of the public health ssrvice, many thousands of sailors, on merchant ships, have been treated with the serum at the government's marine hospital.

Before the resort to immunization typhoid cases in the army averaged about three to a thousand enlisted strength or in the neighborhood of 250 cases a year. In 1910, before the beginning of the treatment, the rate was 2.32 a thousahd; in 1911 it dropped to .80; in 1912 to .62; this year the rate is practically nothing.

The difficulties in extending protection to sailors is said by the naval surgeons to be much greater than in the case of soldiers, owing to the fact that the former are landed in strange ports, going to all sorts of places and eating all kinds of food, and generally are beyond the watchful eyes of the superior officers.

Typhoid cases in the navy, which in 1911 numbered 3.61 a thousand, dropped to fifty-seven cases, or .92 a thousand in the following year. During the current year up to October 1, the percentage was only .30. Where typhoid occurred among those who had been treated the cases were mild and the convalescence rapid. The fleet surgeon of the Atlantic fleet now reports that the prophylactic treatment has practically eradicated typhoid from the fleet."

It is a prevalent belief that the general practitioner has not fully appreciated this wonderful prophylactic agent. This preventive and curative serum in typhoid fever is no longer in its experimentive stage, and it should be used, not only in the army, and navy, hospitals, schools, prisons, and asylums, but in every community, village, and town in the country. Every one who has, for the last few years, come into close contact with typhoid fever, certainly students, nurses, attendants, and orderlies, and seen its protective and curative properties should encourage its universal adoption. The serum is harmless, inexpensive, and never produces any marked discomfort. It is without danger and absolutely effective.

DELUSIONS.

There are many delusions, i.e., from our point of view! What one may regard as a rank delusion, another might think a scientific fact! The late crank, J. N. Free, claimed that in the Civil War, both sides were right, according to the standpoints from which they considered the matter.

From our standpoint today, we consider the "Christian Science" cult to be the most stupendous delusion of the age! And in many of its deduztions, practices, and applications, is criminal in its effects. The mind controlling the body, so that there is no such thing as matter, *per se!* They never admit that the body affects the mind; yet in diseased conditions, we know it does! "There is no disease!" It is a natural, physiological fact, that the human body is the laboratory of pioneers; and only when elimination is regularly performed by the activity the functions, through the skin, lungs, kidneys, liver, and intestines, can diseases and death be prevented! Prayer, and faith, will not throw off the causes of diseases! Disease is the result of a disturbance of normal physiological function; and whether this disturbance is caused by ignorance of physiologic laws, or wilfully, the result or penalty is self-inflicted; and that penalty is disease.

King David was certainly a praying man; but he died at 70 years of age; and Solomon only lived to be 58 years old! They surely must have been men of prayer and faith! God never promised to cure any one who violates any law He created. Saint and sinner, the righteous and the ungodly are amenable to the same physiologic laws; and one doesn't live longer than the other. Some of the oldest men I have known were not even temperate in anything, and to die of senility!

"Christian Science" was never taught by the prophets, nor by Christ himself. Death and disease visit all indiscriminately, from the infant in the cradle to the very old. Heredity, and the transmission of disease, exacts an awful toll; and *any science* is helpless to prevent it. Christian Science is a delusion, and an affront to true science; in other words, to the science of life.

Editorial News Items.

The report of Dr. John McCampbell to the recent meeting of the Directors of the State Hospital at Morganton, N. C., shows the presence in the institution of 1,302 patients. During the past four months 56 were admitted, 2 discharged and 17 died, and during the same period 57 were denied admission for lack of room. The work on the building for women is being pushed, and it was also arranged to construct a new dormitory with a capacity of 75 for males, this being possible under the appropriations of the last legislature.

At the recent meeting in Statesville of the Ninth District Medical Society of North Carolina, the following officers were elected: Dr. J. E. McLaughlin, of Statesville, President, and Dr. F. A. Carpenter, also of Statesville, Secretory.

"Tag-day" at Charlotte, N. C., resulted in the raising of $850.00 for the benefit of "Dunnwhyce," the State Nurses' Home at Black Mountain, N. C., which when opened formally in 1912 was said to be the first State Nurses' Home established in the United States.

The Cherokee County Medical Society had a very interesting meeting recently and elected the following officers for the ensuing year; Dr. N. B. Adams, President; Dr. S. C. Heighway, Secretary; Dr. J. N. Hill, Representative; and Dr. W. C. Morrow, Alternate.

Gov. Locke Craig has commissioned the following Canton, N. C., physicians officers of the recently organized Ambulance Corps of the State Guard located in that city: Captain, Dr. Thos. F. Reynolds; Lieutenants, Drs. J. H. Mease, F. M. Davis, W. C. Johnson, and J. R. McCracken, of Waynesville, N. C.

The State Orthopædic Hospital of Gastonia, N. C , has been incorporated by the Secretary of State at Raleigh, N. C. It is intended to make this an institution especially for the care of indigent children, and the articles of State incorporation include the names of both U. S. Senators, the State Superintendent of Public Instruction, wealthy capitalists and other equally prominent citizens of North Carolina.

Robert E. Seibels. of Columbia, S. C., a senior student, class 1914, of the College of Physicians and Surgeons of New York, has been awarded second choice of interne position in hospital appointments in New York City. He has selected the surgical service of St. Luke's for the ensuing two years. We congratulate the brilliant young Southerner, and expect him to do like the most of our young men, make good to a marked degree.

Greensboro, N. C., under the lead of Dr. J. T. J. Battle, health commissioner, opened on April 1st a vigorous anti-mosquito campaign.

Dr. Samuel B. Medford, of Clyde, N. C., sustainsd the loss of a drug store and stock by fire on April 3, 1914.

Drs. Chas. L. Minor and Wm. L. Dunn, of Asheville, N. C., have purchased sixty acres of land on the southern slope of Mount Pleasant, a little more than two miles out of town, and are preparing to erect a sanitarium for tuberculosis cases at an expense of $250,000. The buildings will be fireproof and first-class in every particular, affording the most superior accommodations and facilities for the management of tubercular patients.

Dr. D. A. Garrison, of Gastonia, is spending a few weeks doing postgraduate work in New York City.

Dr. M. R. Gibson, formerly of Maxton, N. C., but who has been working in New York clinics for a year, has recently located in Raleigh where he is confining his practice to the eye, ear, nose and throat.

Dr. J. Allison Hodges has been appointed by Gov. Stuart to represent Virginia at the Third Annual Meeting of Alienists and Neurologists of the United States to be held under the auspices of the Chicago Medical Society in Chicago, July 14th to 18th, 1914.

Dr. D. W. Bulluck, of Wilmington, N. C., one of the best known surgeons and physicians in this State, died at his home on May 6th. The Doctor was ill only about ten days. He was born in Tarboro in 1853 but had lived in Wilmington since 1890, and the people of that entire section exhibited many evidences of their friendship and esteem for him. He was for many years visiting surgeon to the Atlantic Coast Line and had been for possibly fifteen years director of the Eastern Hospital for the Insane at Goldsboro. He joined the State Medical Society in 1875 and was always an active member, and held in high esteem by all of his professional associates throughout the Carolinas and Virginia. His death is a great loss to the medical professton of this State and the adjoining States.

BOOK NOTICES.

The Full of the Moon. By Caroline Lockhart, author of "Me-Smith," "The Lady Dog," etc. With illustrations by Charles H. Stephens. Philadelphia and London: J. B. Lippincott Company, 1914.

This book, the story of a girl who insists upon having her "fling" and goes out West to have it, is one of the most interesting new books. The attention of the reader is held until the end. The book contains about 300 pages with several appropriate illustrations in colors. Price $1.25.

Diseases of the Heart. By James MacKenzie, M.D., F.R.C.P., etc., Physician to the London Hospital (in charge of the Cardiac Department), Consulting Physician to the Victoria Hospital, Burnley.

Third Edition. Oxford University Press, Publishers, American Branch, 35 West 32nd St., New York City. 1913. Price $5.50.

This is a handsome large volume of over 500 pages, and its author being of world-wide reputation makes it at once interesting, and any physician wishing to have a work from one of the very best authorities on the subject on which it treats will want a copy of this, the third edition of Dr. MacKenzie's work in his library. In his preface to the present edition of this valuable work, the author says:

"The advances that have been made in the knowledge of the heart since the last edition of this book was published (1910) have necessitated the rewriting of the greater portion of this work. These advances have been mainly along three lines: First, the clearer differentiation of the signs of disease. For this purpose the introduction of the electro-cardiogram has been of the greatest service. Second, the bearing of heart manifestations on the question of heart failure, present and remote. Third, the basing of treatment on sound and scientific principles. The study of cardiac physiology and therapy has hitherto been based on what happens to normal hearts with normal rhythm. These later investigations have shown that in hearts affected by disease the reaction of the heart to stimulation is profoundly altered; in consequence, it is necessary that the physiology of diseased hearts, and especially of those with abnormal rhythm, should be carefully studied. So far some progress has been made, and we can now treat such conditions as auricular fibrillation and auricular flutter in an intelligent manner. Moreover, later investigations have also shown how helpless we are in the face of many conditions, and the recognition of the helplessness provides an object to which investigation should be directed.

"To give practical proof of the views expressed in the text I have added many illustrative cases in the Appendix."

Specific Diagnosis and Specific Medication. By John William Fyfe, M.D., formerly Professor of Specific Medication in the Eclectic Medical College of the City of New York. A thorough work on specific medication, embodying the work of the late John M. Scudder, M.D. Second Edition, 8-vo., 784 pp. J. K. Scudder, Publisher, 630 West 6th St., Cincinnati, Ohio. 1914. Price, cloth, $5.00; sheep, $6.00.

Dr. John M. Scudder, of Cincinnati, Ohio, was the headlight of the Eclectic section of the medical profession of America for years. He was a man with a wonderfully brilliant mind, a successful organizer and general practitioner and author. His works today are held in high esteem by all Eclectic physicians.

Dr. Fyfe has now brought Dr. Scudder's work up to the present need of the profession. Of course this is an entirely new work, embodying, in his own words, all essential parts of Dr. Scudder's two works, "Specific Diagnosis" and "Specific Medication," and the facts presented by more recent authors, together with the author's personal observations.

This work will undoubtedly be well received by all Eclectic physicians and will no doubt have a large sale.

Practical Sanitation. A Hand-book for Health Officers and Practitioners of Medicine. By Fletcher Gardner, M.D., Captain Medical Reserve Corps, U. S. A.; Health Commissioner of Monroe County, Indiana, and James Parsons Simonds, B.Ar, M.D., Professor of Preventive Medicine and Bacteriology, Medical Department University of Texas; lately Superintendent of Indiana State Laboratory of Hygiene. Illustrated. C. V. Mosby Co.. Publishers, St. Louis, Mo. 1914. Price, $4.00, net,

Apparently this book fills a long-felt want, as it embraces within the covers of a moderate priced volume an exposition of the duties of the health officers, written by one experienced in the routine and emergencies of the local sanitary service and familiar with the needs of the local health officer.

The authors of this work have aimed to provide a safe way for the health officer to meet any emergencies that may arise. By a careful perusal of the book it will undoubtedly aid the health officer to solve his problems, and assist him in raising the standard of the public health.

Radium Therapeutics. By N. S. Finzi, M.B. (Lond.), M.R.C.S., L.R.C.P., L.S.A., Chief Assistant in the X-ray Department St. Bartholomew's Hospital. Oxford University Press, Publishers, American Branch, 35 West 32nd Street, New York City. 1913. Price, cloth, $2.00.

Here we have a little book of over one hundred pages, handsomely printed on heavy coated paper, and on a subject which at the present moment is of great interest to most medical men. This little book gives a clear and succinct account of the action and uses of radium and its rays. The author has, he says, endeauored to distinguish between ascertaining facts and results which have not been definitely proved. The book is divided into six chapters, which are as follows: Introductory; Internal Adminis-

tration of Radium; Histological, Physiological and Pathological Action; Treatment of Superficial Diseases; followed by an Index—Other Rario-active Substances, and a complete Index.

A History of Laryngology and Rhinology. By Jonathan Wright, M.D., Director of the Department of Laboratories, New York Post-Graduate Medical School and Hospital. Second Edition, Revised and Enlarged. Octavo, 357 pages, illustrated. Cloth, $4.00, net. Lea & Febiger, Philadelphia and New York, 1914.

This work belongs to the type of medical book which is but rarely published, and then only in limited editions, which appeals to the physician for its literary and historic value rather than for its practical usefulness in his everyday professional life. It is a book which will afford him pleasure and recreation in his leisure hours, and from which, nevertheless, he will obtain much that will be of value to him in his daily routine. It will broaden his point of view, and glve him a better perspective, not only of the specialty in which he may be engaged, but also of all branches of medicine, to see how the particular department reviewed herein has grown from crude beginnings to one of the most highly perfected of all the specialties. The author is not only a gentleman of eminence in the medical world, but also a litterateur and a historian, and he has portrayed his subject in an interesting and charming style. Beginning with Egyptian Medicine, and continuing until the advent of modern procedures, Dr. Wright has given the reader a story full of entertainment and historic interest.

Prevention and Control of Disease. By Francis Ramaley, Ph.D., Professor of Biology in the University of Colorado, and Clay E. Griffin, B.A., M.D., Instructor in Surgery in the University of Colorado. University Store, Boulder, Colarado. 1913.

Recent progress in disease-prevention has depended largely upon the efforts of laboratory investigators, physicians, and public health officials. The main object of this book is to rouse the attention of intelligent citizens so that they will appreciate this work and co operate in its extension. It is intended for the general public and for use as a text book in college classes, not for medical students, practicing physicians, or biologists of any kind.

Chapters XXIV and XXV are written by Dr. Griffin, the others by Prof. Ramaley. The two authors have read and criticised each other's manuscripts, thus securing the best results.

The Hypodermic Syringe. By George L. Servoss, M.D., Editor of "Nevada Medicine," Member of the Nevada State Medical Association, Fellow of the American Medical Association. Physicians Drug News Co., Publishers, Newark, New Jersey, U. S. A. Price, $2.00.

In this little volume, the author has not attempted to give us matter of an original nature but rather to give a condensed narrative of the hypodermic syringe and its possibilities, as set forth by numerous authors and investigators. It was less than a century ago that the hypodermic syringe and the hypodermic syringe and the hypodermic method of medication were first brought into use. Then the instrument was used primarily for the quick introduction of morphine for the relief of pain, and it became a common comment that he who used the instrument, did so for the purpose of administering this drug and no other. This idea still lingers in the minds of many, even today. However, with the passing of time, it was found that many other drugs might be exhibited in this way, and the hypodermic method paved the way for a greater and better drug application. Not only have drug agents been employed by this method, but it has opened an avenue for the application of many substances which could not be administered orally because of the destructive action of the digestive ferments of the alimentary canal.

Many diseases, considered incurable under the older methods of drug administration, are now showing either improvement o satisfactory termination when the hypodermic method is being employed, and this method of drug administration has become a boon to humanity.

The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume III, Number 1. Octavo of 190 pages, 91 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Published Bi-Monthly. Price per year: Paper, $8.00; cloth, $12.00.

Many of the cases referred to in this number, in connection with the clinical talks of Dr. John B. Murphy, have already been reported in past numbers of the Clinics, and the same may be said in regard to the skiagrams and photographs illustrating these cases. These were, however, shown in connection with the clinics held during the Clinical Congress of Surgeons, November 1-15, 1913, and are, therefore, part of the record, which accounts for their repetition. They show, moreover, the further progress of these cases and complete the histories of many of them.

Some of the most interesting subjects dis-

cussed in this number are as follows:

Fracture of Internal and External Malleolus on a Line with the Tibio-Astragaloid Articulation.

Charcot Ankle; Removal of Articulation and Nailing of Astragalus to Tibia.

Gastric Ulcer and Gastric Carcinoma. Gastric Analyses Illustrating Various Types of These Lesions.

Ununited Fracture of the Ulna. Transplantation of Bone from Tibia.

My Wife's Hidden Life. Rand, McNally & Company, Chicago and New York.

This book searches to the depths of a man's nature and reveals the hidden currents which lead to the destruction of a home. It is a marvelous representation of life—real life—and of the terrible heart conflicts which virtually rend asunder the life of the spirit and the life of the body. It is a compelling drama of the play of the influence of a good and a bad woman on a man of the world whose chief ambition is for financial success. Weak where he thought himself strong, he is à cat's paw in the hands of a designing disturber of the tranquility of a home presided over by a woman of the highest ideals and loftiest character. She waged an unequal battle, and apparently lost, only in the end to win that which would have made her so happy on earth—the heart and soul of her husband.

It is a book to be reckoned with, for it is logical, true to human nature, and gains an undeniable hold on the heartstrings.

Price $1.25. Postage 12c. extra.

The Fundamental Basis of Nutrition. By Graham Lusk, Professor of Physiology, Cornell University Medical College, and Scientific Director of the Russel Sage Institute of Pathology. New Haven: Yale University Press. London: Humphrey Milford Oxford University Press, MDCCCCXIV. Price 50c.

This book presents the subject of nutrition in its broad general aspects and suggests the possibility of the practical application of some of the facts which years of labor through many generations of workers have brought to light. It offers a scientific calculation of the food, or fuel, demanded by the human machine. There are six chapters, namely: Historical; The Constant Need of Fuel; The Constant Need of Protein; Habits of Diet; The Curious Disease Disease of Beri-beri; and Criteria of the Monetary Value of Foods. These chapters are none of them long, the whole book containing but 62 pages, but they bring the matter before us in a clear direct manner. It takes a very short time to read the book and it is time well spent. It gives us pleasure to give it this notice in the Journal.

The Honey Pot.

Given as the setting, a spot shrouded in a mantle woven of poetry and romance—a garden of two centuries ago—with the snow-capped Popocatapeti as a background; the heroine the most beautiful woman in the world, with all the charm and fascination of the women of her country, and three young Americans with little care and less occupation, and the result is inevitable. The Honey Pot is Lelita Fingado, and her witchery is such that she succeeds in blinding the eyes of the three young men so successfully that each in turn considers himself the favored one, and all the while she is secretly enlisting their aid in eloping with the man of her choice—another American. Just how she succeeds in her ruse and what transpires in this beautiful garden makes a most capital story. Norval Richardson has put into his book the spirit of romantic Mexico; also he succeeds in holding the reader's attention until the end, which is as much of a surprise as it is amusing.

L. C. Page & Co., Boston. Price, $1 net.

Another Sherlock Holmes, Father Brown, or Thinking Machine, has come to join the ranks in the form of "Quincy Adams Detective," whose chronicles are related by Charles Felton Pidgin.

Quincy is a lively young chap with a hankering for thumb prints and chemical analysis and other secrets of the sleuth. So, accompanied by a fidus Achates named Gates, he revels in mystery and crime and clears up scores of murders and thefts which have baffled the city police for months.

For those looking for the thrills of a detective story, with its inevitable clearer-than-day solution, these short stories written in Mr. Pidgin's usual dashing style, will supply all necessary excitement and adventure. (L. C. Page & Co.)

"Stammering and Cognate Defects of Speech." By C. S. Bluemel. Published by G. E. Stechert and Company, New York.

This is the only satisfactory work on stammering which the reviewer knows of. The author is a professional psychologist, himself a stammerer. In volume I, is first explained the mental imagery comprised in speech and its disorders; then the data are applied to the study of the mechanism of stammering. The chief factors are auditory amnesia with mental confusion; auto-suggestion with fear; and faults of the physio-

logical coordinations. The first of these is believed by the author to be usually a congenital defect homologous to the dyslexia found in about 1% of school children. This, in the author's opinion, is the only true stammering; and of course it is a form of aphasia. This opinion the author illustrates by a case which entirely recovered from dysarthria; but this does not appear to be a good argument in favor of the author's contention that stammering is in reality a form of auditory aphasia or amnesia; although his arguments that it is not a form of aphemia, are in the main cogent enough; for it never occurs in the congenital deaf who are taught to speak, the reason for which he believes to be fundamental and not accidental as Gutzman thinks. The importance of this factor in estimating the educational capacity of children has been almost overlooked.

The author's remedy, when this congenital defect cannot be compensated by acoustic imagery, is to cultivate the kinæsthetic imagery as is done in deaf mutes. The auto-suggested factor is the one which is sometimes removed by the attempts of the incompetent "systems" which are advertised so much and throw so much disrepute upon scientific attempts to treat stammerers. Among these, the author includes the system of psychoanalysis of the Freud school, which he stigmatises in a scathing fashion as being based upon "a superlatively superficial psychology, unequivocally stultified by use of symbolism, which can interpret the material of any case to suit the circumstances." This is considered in Volume 2 along with all the other systems. They are classified according to whether they lay most stress upon respiration, vocalization and vowel production, articulation, verbal exercises, etc., mechanical appliances, etc., and psychological methods. The treatise is concluded by a chapter entitled "Stammering Schools" and "Speech Specialists," which may be commended to those medical organizations which are endeavoring to combat quackery. There is an admirable bibliography, and a glossary, and index, which should be particularly useful to laymen. The book is so clearly written and so interesting and free of padding while comprehensive, that it should appeal not only to physicians but to all who are interested in human development.

TOM A. WILLIAMS.

Historic Forces at Work in Mexico.

To have recognized Huerta and given him moral support, would have been to deny all the proper tendencies of the age in which we live. The civil war must have come in any case, for the people of Mexico would not have submitted to a government of tyranny established through treachery and assassination. To balance the personal character of the bandit Vilia against that of the soldier Huerta, was not to arrive at any conclusions worth the attention of the student of politics and history. Villa came to the forefront because he happened to be a fighting man who had identified himself with an irrepressible revolution. This revolution means the break-up of an old regime. Whatever the results may be as regards the issues of war, there can be no return to the kind of government in Mexico that formerly maintained order and that Huerta would have tried to perpetuate. As a result of this conflict there must be the clear beginning of a system that will develop the peon into a citizen. Mexico needs reconstruction. Those American military and civilian experts who have accomplished splendid police, sanitary, educational, and other reforms in Porto Rico, Cuba, Panama, and the Philippines, could render assistance of almost inconceivable value to our Mexican neighbors if they should be set at work to direct the reconstitution of Mexican life and government. Perhaps a peaceable way may some day be opened for the performance of this desirable service. But the time has not yet arrived, though intervention may hasten it.—From "The Progress of the World," in the American Review of Reviews for May.

Have You Registered Your Baby?

An Indiana child lost a $12.000 inheritance just because it had no birth certificate, and there was no legal proof of its identity.

Another heir, in order to get a farm that was willed to her, had to prove the date of her birth. She finally succeeded, but only by proving that she was born on the same day that a high-bred calf was born in her father's barn! The calf had a birth certificate, but the girl had none!

The May Woman's Home Companion shows that the United States has few and poor laws about the registration of births. The result is that tens of thousands of little babies sicken and die who might be saved if they were registered so that medical attention could reach them in their earliest hours on this earth.

The subject is important and fascinating. The author of the Companion article is Julia C. Lathrop, Chief of the Children's Bureau in the United States Department of Labor.

Nothing short of a trip to Mexico could give so accurate and pleasant an impression of the cultivated people of that distressed

country as the charming stories that are now appearing in The Century Magazine by Maria Christina Mena. The Century announces for May another story by Miss Mena called "The Birth of the God of was."

Literary Personalities.

It is a long time since James Lane Allen has appeared before the world as a writer of fiction. He has written a long story which The Century Magazine will print complete in the May number. It is said that this story by the author of the idyllic "Kentucky Cardinal" in an idyl of New York City. The scene is laid in and near the new Cathedral of St. John the Divine on Morningside Heights;and the Art School of the National Academy and St. Luke's Hospital are both included in the setting.

George Moore, the author of "Esther Waters" and of many other books which had a multitude of readers, is now living quietly in London working on his reminiscences. He contributes to the May Century Magazine an article comparing Shakspere with Balzac. This was originally written in the French language, as an address which he gave before a French audieuce, and he has translated and rewritten it for The Century.

Mrs. Ruth McEnery Stuart, author of Daddy-Do-Funny's Wisdom Jingles, has just finished a long story for The Century Magazine which will appear in the May number. She is spending the winter in Louisiana where the scene of the story is laid.

What Intervention Would Mean.

If intervention were undertaken by us it would be with the announcement of unselfish motives. Our Government would proclaim to the world its purpose to protect the Mexican people from themselves; to help them established conditions of peace, order, and justice; to protect the lives and property alike of Mexicans and of foreigners, and to gain neither territoral advantage nor political ascendancy for itself. There would be all sorts of renunciations in advance. Congress, by joint resolution, would pledge the honor of the United States to a merely temporary occupation, and to a full withdrawal as soon as order had been restored. We should have won in the end, and established apparent peace; but we should soon have withdrawn and Mexico would still have its own future to work out. Meanwhile, we should have sent several hundred thousands of our young men into Mexico, with the sacrifice of many lives, with the public expenditure of from five hundred millions to a thousand millions of dollars, and private economic sacrifice and loss to a far greater extent. It is true, as Senator Sheppard admits, that the desperate conditions in Mexico have resulted in the unfortunate loss of the lives of Americans and other foreigners, and in the annihilation of property interests to a large amount. But a war of intervention would destroy all that remains of foreign property in Mexico before peace could be established, besides the incomparably greater economic sacrifices involved in the expense of our undertaking.—From "The Progress of the World," in the American Review of Reviews for April.

Abstracts of the Leading articles of the month.

The Treatment of Corns and Warts by Ionization.—Jones (British Medical Journal) first uses a zinc positive needle for the centers or foci of the corn, and this is followed by ionization of the whole affected area with a zinc plate and a pad moistened in the usual way with a zinc salt. It is usual to prescribe a compress of zinc sulphate of a strength of one per cent. to be applied for some hours before the ionization, in order to have the horny epidermis imbibed with the solution beforehand, so far as this can be accomplished by simple diffusion.

After such treatment corns on the soles of the feet disappeared in three or four weeks, leaving no trace. As to warts, transfixion with a zinc needle with a milliampere of current for a minute suffices. If large the wart is transfixed crucially. A little more current or a longer time may sometimes be desirable.

When warts are numerous and small and close together, ionization with a pad and zinc solution is quicker than needling of the individuals. For some warts magnesium answers very well, especially for the flat multiple warts of the backs of the hands and of the face. There seems to be some evidence that the magnesium salts by the mouth exercise a specific influence upon warts, causing them to crumble away and disappear in a very few days.

Operations for Harelip in the Out-Patient Department.—Nicoll (Edinburgh Medical Journal) mentions the extremely low mortality, even in alveolar cases and those complicated by cleft palate, in both of which the intermaxillary bone has to be cut and wired in position as a preliminary to the harelip operation proper. The healing is by first intention and the cosmetic

result unusually good. The subsequent contraction of the scar tissue is a serious factor in harelip operations. Inevitable in all, it leads in a number of cases to flat nostril, notched lip, or asymmetrical mouth, since it is not possible to keep out patients under constant observation. The effects of scar contraction are most troublesome in unilateral cases. In the avoiding of flat nostril, notched lip, and asymmetrical mouth in unilateral harelip, experience has led Nicoll to adopt five lines of procedure which are more or less opposed to much of the current teaching on the subject. They may be briefly stated as follows:

In the preliminary cutting and wiring of the intermaxillary, that process is so pared, manipulated, and wired that the tip of the nose and the nasal septum are distinctly displaced to the deformed side—that is to say, the flattening of the nostril is partly remedied by pulling the nasal tip to the ala instead of being entirely remedied by lifting the ala toward the tip and septum of the nose. The latter procedure demands extensive under-freeing of ala and cheek, with inevitable subsequent contraction of the raw surface created and resulting flattening out of the nostril.

The majority of current writers lay stress on the avoidance of tension by free elevation of ala, lip, and cheek by undercutting. A not inconsiderable experience has driven him into the opposite camp of the small minority who hold that a moderate degree of tension is the lesser evil. Sutures properly placed and tied will stand a good deal of tension without giving or cutting; and a lip which looks in the first instance taut and strained will ease off wonderfully in a few weeks. On the other hand, the extensive undercutting necessary to obtain an ideal degree of primary relaxation produces necessarily much scar contraction, with resulting secondary distortion.

In cases in which extensive elevation of ala and lip are unfortunately necessary, secondary contraction with adhesion to the underlying bone may be avoided by the insertion of tinfoil between the soft parts and the periosteum. Mucous membrane or mucous epithelium soon lines the raw tissues opposed to the surfaces of the plate, so that these do not adhere when the plate is withdrawn, but form a part of the buccal cavity.

Secondary cicatricial contraction tends to produce a notch in the prolabium. Placed laterally, this is often very unsightly. In the middle line it is always much less so, and in some cases is even "rather becoming." Only those methods of paring the flaps which provide for median juncture should be adopted.

A specially made oval tube or an ordinary vulcanite, celluloid, or metal oval nasal splint for deflected septum, such as Asch's, Meyer's, or Kyle's, has a really remarkable effect in molding the deformed nostril and preventing secondary flattening. It may be introduced at the time of the operation, or during the operation the closure of the nostril may be purposely overdone and the splint introduced at the end of two or three weeks. In either case the shape and size of splint are judged by those of the normal nostril. Its position is settled by making its long diameter, if oval, correspond to the line of that of the normal nostril. This will necessarily be at right angles to the long diameter of the aperture of the flat malformed nostril. The expense of having these splints specially made of small size for harelip cases may be avoided by using nasal splints of the usual stock sizes and cutting them across with a fine file at the point of suitable circumference.

Arteriovenous Anastomosis for Impending Gangrene.—Goodman, in The London Lancet, reports 15 consecutive cases of arteriovenous anastomosis, the largest number yet reported from a single source. It is recalled that Frank in 1881 was the first to attempt such a procedure. In 1902 Carrel reported his perfected technique. The first operation report was in 1902. It proved unsuccessful. In 1912 Bernheim, of Johns Hopkins Hospital, reported six operations with four successes, and in his review of literature reports 52 performed by 32 operators; of these, only 15 were successful. End-to-end suture according to the method of Carrel was employed 23 times with eight successes; lateral 12 times with four successes; invagination, end of artery into end of vein, twice with one success; intubation according to the method of Wieting, nine times with two successes. Bernheim ascribes the large number of failures, first, to the great number of operators; secondly, to the fact that a number of the cases were seen late in the course of the disease; and thirdly, that vascular surgery is still in its infancy and offers many technical difficulties.

It has been shown by physiological experiment that the establishment of the reversal of the circulation in the extremity is practically impossible. These findings, however, are controverted by 15 successful cases. The indications for arteriovenous anastomosis reside in angiosclerosis and in arterial thrombus, where the integrity of the limb may be preserved by this means until collateral circulation is established. In regard to methods, end-to-end anastomosis offers the simplest technique and is least

likely to be followed by thrombosis.

As to results, it has been noted that the foot previously cold and cadaverous in appearance took on a feeling of warmth and a healthy pink color. The pain due to ischemia was relieved shortly after operation in all cases. The vein is pulsating below the site of anastomosis and the part threatened with gangrene, or actually affected by it, turns to normal. Of the 15 cases there were six successes. Several of the cases which promised success required amputation later, but even these had temporary relief from pain. Operation is not advised in the presence of sepsis or advanced or fulminating gangrene. The time for operation is in the pregangrenous stage. In non-septic gangrene the improved nutrition of the leg may be hoped for, permitting lower amputation than would otherwise be possible.

Before the sheath of the vessel is opened the wound must be absolutely freed from and dried of any visible signs of blood, and then covered with sterile wound protectors. Thin, black, oriental silk is best suited to this purpose.

There were 13 end to-end anastomoses, one side-to-side, and in two of the cases an exposure of the vessel showed that an attempt to anastomose was not warranted on account of the advanced stage of thrombosis of the vessels. The author believes that the predisposing factors in the symptom-complex of the disease and the results so far obtained by operation warrant us in believing that whenever the operation is undertaken before gangrene has actually set in, the distressing symptoms can be relieved without the sacrifice of the limb to amputation, which heretofore has afforded the only means of relief.

Pituitary Extract in Obstetrical Practice.—Watson (The Canadian Medical Association Journal) reaches these conclusions:

Pituitary extract has a powerful effect in inducing and in strengthening uterine contractions.

The type of contractions induced is similar to that which occurs normally, although at first there may be a tendency to prolongation of the pains.

Such prolonged contractions result in slowing of the fetal heart, but the child is seldom in danger.

When given in the late part of the first and in the second stage of full-time labor the polarity of the uteride contractions is not interfered with, but in early abortions and early in the first stage a simultaneous spasm of the os may occur.

Its chief field of usefulness is in the first and second stages of labor, when there is delay due to feebleness of the pains, alone or when combined with other complications, such as malpositions of head, malpresentations, multiple pregnancy, slight narrowing of the pelvis, etc.

In the induction of abortion, in the treatment of abortion already in progress, and in incomplete abortion, its action is so uncertain that it is not to be recommended except in cases in which the os is widely dilated.

In the induction of premature labor its effects are uncertain, but if sufficient dosage be given they may be good.

In the induction of labor at full term and after better results are obtained than in premature cases.

It gives good results in many cases of postpartum hemorrhage, but is not superior to the various preparations of ergot. It has the power of sensitizing the uterus, so as to allow these preparations to act more powerfully, the combination being most effective.

It is a useful adjunct in the treatment of placenta previa, when employed in conjunction with rupture of the membranes, the use of hydrostatic dilators, or turning.

The Isolation of Cocci from the Urine.—Crowe (The Journal of Vaccine Therapy) gives a note on the means for isolating cocci from the urine, often a difficult matter in the presence of other and more luxuriant growers. He finds that 10 to 15 minutes of treatment with antiformin will B. coli and most putrifying organisms. Twenty minutes heating to 60° C. will do the same. In both cases "rheumatic" sireptococci and staphylococci will remain alive.

Ante-Mortem Thrombosis in the Right Heart and Pulmonary Arteries as a Cause of Death in Lobar Pneumonia.—Fleming (Edinburgh Medical Journal) designates as ante-mortem blood clot the firm, opaque, fibrous clots found in the right heart in certain cases of croupous pneumonia. They may arise in the right auricle or ventricle; they are attached firmly to such structures as the musculi pectinati of the right auricle, the chordæ tendineæ of the tricuspid valve, and the columnæ carneæ of the wall of the right ventricle, and they extend through the pulmonary orifice, the clot generally having moulded on it, if it be extensive, the impression of the pulmonary cusps, and they may reach into the quite small branches of the pulmonary artery. These clots are not adherent to the pulmonary arterial wall, and they often show some colored and obviously post-mortem clot associated.

In post-mortem examinations of sixty-one cases of lobar pneumonia, there were found thirty-nine showing ante-mortem clotting in the right auricle, right ventricle and pulmonary arteries; and of these thirty-nine, in sixteen the clot was adherent and large in amount, while in the remaining twenty-three it was mostly colorless but not adherent.

Of the balance of the sixty-one autopsies, in twenty two cases nine showed only colored clot in the right heart, and in thirteen there was fluid blood with little or no clot of any kind. In most of the cases noted as showing adherent colorless clot in large amount there was a small amount of similar clot in the left heart.

The obvious signs of such thrombosis occurring during life are increased engorgement of the jugular veins in the neck, associated with gradual weakening and later disappearance of the second sound at the pulmonary area. In every one of these cases in which there was extensive ante-mortem clotting in the right ventricle and pulmonary arteries, there was marked dilatation of the right heart.

The clinical value of early recognition of this condition is obviously of great importance. If there is danger of cardiac and pulmonary thrombosis, then stimulation, particularly of the heart, should be the routine treatment for all cases in which such thrombosis may be expected to occur.

Every case of croupous pneumonia should be treated early, and continuously, by the administration of a direct cardiac tonic, such as digitalis or strophanthus.

Such diffusible stimulants as spirit of chloroform and aromatic spirit of ammonia should be given at once if the heart shows any signs of difficulty.

Oxygen may counteract the excess of CO_2, which, according to Wiener and others, aids clotting.

It might be wise to depart from the usual plan of preventing any change of posture of the patient in bed. In fact, altering the position of the patient may be actually beneficial.

The use of anti-thrombin ferment would be ideal, but at present it is not within the scope of practical therapeutics. Citric acid in thirty to sixty grain doses four-hourly has been much commended in cases of venous thrombosis, and Sir A. E. Wright supports this method of treatment. Addis has, however, demonstrated its futility in a small series of cases.

If we are convinced that ante-mortem clotting is a cause of death in pneumonia, bleeding should never be performed unless in particularly robust patients, and never for what looks like engorgement of a dilated right heart. It may only aid thrombosis which has alraady begun. Auscultation of the pulmonary area should in any case be first carefully carried out.

Treatment of Diabetes Mellitus.—Brown (Clinical Journal, London) points out that under the now prevailing system of only partial restriction of the carbohydrates in cases of glycosuria, one need not insist as a routine on pure gluten bread. Rolls consisting of mixture of gluten with some starch are convenient and palatable, though the author finds it still advisable to intercalate some days on which a gluten or protein bread is given. Potato cakes may replace bread to a certain extent, and levulose can sometimes be assimilated to the extent of about 15 drams (60 grams), if cautiously given in divided doses each not exceeding 5 drams (20 grams). Dr. Brown has seen stribing benefit from the use of this form of sugar.

An important fact to be borne in mind in regard to the diabetic diet is that a patient can often take a vegetable diet, naturally containing a good deal of carbohydrate material, better than he can manage a carbohydrate free diet with abundant meat. Thus, in the course of an ordinarily restricted diet a week of the following diets may be advantageously introduced:

(a) For two days: Lettuce, cabbage, spinach, veal broth, three eggs, butter, two lemons for lemonade, coffee.

(b) For three days: Eight ounces of oatmeal as porridge or oatcake, four ounces of butter, five eggs, two lemons, coffee.

(c) Two days of (a) again.

In the presence of acidosis, citric and glutaric acids and alcohol may, to a limited extent, replace the carbohydrates in metabolism. Citrates may be added to the alkaline mixture that should always be given when the diet is being restricted or when acidosis is marked. In spite of the dangers of the alcohol habit, it is often advisable to give alcohol to the extent of about an ounce of the pure spirit in the day. Malt liquors, sweet wines, champagne and liquors are naturally to be avoided. In the alkaline treatment it is not sufficient to give sodium salts alone, as is often done, for this results in draining salts of other metals from the tissues. The author employs the following mixture, based upon the relative amounts of the metals normally present in the urine:

℞ Sodii bicarbonatis.....ʒi (4 grams);
Potasii citratis.....ʒss (2 grams);
Calcii lactatis..... } ...aa gr. iii (0.2 gram);
Magnesii carbonatis }
Aquæ, q. s. ad,.....fʒi (30 grams).

M. Sig.: To be taken three times a day or at shorter—up to three hourly—intervals,

according to the severity of the case.

Such treatment augments the diacetic reaction in the urine for a time, but this is merely because the excretion of the acetone bodies is being facilitated, and not because of increased production.

Improved Method of Operation in Dupuytren's Contraction of the Fingers.—Hutchinson (Proceedings of the Royal Society of Medicine) mentions the fact that even where the surgeon carefully removes every portion of the palmar fascia he may find that the rigidly contracted finger or fingers in Dupuytren's contraction often cannot be straightened completely. The time required for healing of the wound hinders further measures for rectification, and whatever form of splint is employed, there is risk of permanent stiffening of the finger. It is in the first interphalangeal joint, the author finds, that the main obstacle to reduction exists after complete excision of the palmar band. Rontgen ray examination shows that the head of the first phalanx actually becomes altered in shape in some cases. The modification in operative treatment proposed by Hutchinson when palmar excision is found insufficient, as it always is in long standing cases, is to turn over the hand, expose the extensor tendon over the first interphalangeal joint, hold it aside or, if necessary, divide it temporarily, clear the head of the phalanx, and completely resect it at the neck. This will usually be found to allow the finger to come straight without tension. It might be objected that the division of the anterior joint ligament entailed would be apt to leave a flaillike finger, but the author's experience has been that the difficulty lies rather in preventing ankylosis. The method resembles that often employed with success in hammer toe, and the author has found it to give encouraging results.

Tetany.—Marine, in the Journal of Experimental Medicine, presents certain observations on tetany in dogs. As to calcium salts, the Doctor says that they are palliative and preventative, but in no sense curative. In tiding over otherwise fatal tetanies calcium salts are of the greatest value. This fact is of clinical importance, in operations on goitre, in man. When tetanies develop following operations, calcium salts are of the greatest value in tiding over acute insufficiencies. As regards the administration of calcium the stomach route is preferable to all others, and is equally efficient since the few minutes quicker action when given intravenously, is offset by the greater dangers. Subcutaneous injection is also not to be recommended, on account of the irritant action, discomfort and danger of necrosis. He states that in the absence of all parathyroid tissue in dogs, calcium salts will not save the animal's life; while in the presence of active parathyroid tissue, calcium salts will save it. Many factors other than the amount of parathyroid tissue removed, influence the onset of tetany, among which are age, pregnancy, lactation, rachitis, the administration of sulphur, and diet. Pregnancy and lactation tetany in dogs resembles in all essentials, parathyroid tetany. Marine's observations are in harmony with those who hold that thyroid and parathyroid are independent structures as regards their anatomy, physiology, and pathology. The removal of the parathyroids immediately lowers sugar tolerance, but rarely to the degree of constant glycosuria. In sharp contrast with thyroid substance in myxedema the feeding of parathyroid substance fresh or dried, by mouth, is of no value in the parathyroid tetanies of dogs. Calcium salts have a striking palliative effect on parathyroid tetany, and preventative action in tiding over otherwise fatal cases, but are in no sense curative. The mode of action is unknown. There is some evidence thaf calcium salts directly influence the thyroid gland.

Operation in Cases of Aneurysm and Injuries of Bloodvessels.—Coenen (Zentralblatt f. Chirurgie) states that the development of the collateral circulation should determine whether an aneurysm is to be treated by ligation of the afferent and efferent vessels, extirpation of the sac, or aneurysmorrhapy, and it should also indicate whether a large injured vessel is to be merely ligated or sutured. In cases of aneurysm occurring in military practice Coenen has made use of a very simple collateral phenomenon which is universally applicable. Without interrupting the circulation, as by an Esmarch bandage, the the aneurysmal sac is freely dissected out and the artery ligated both above and below, close to the sac, which is thus completely excluded from the arterial circulation. Beneath the peripheral ligature a clamp is applied and the artery divided between it and the ligature. If on loosening the clamp bright red blood escapes from the peripheral stump, this is an indication that sufficient collateral circulation has been established and the ligature may be safely applied. If however, there is no flow of blood, this points to an undeveloped collateral circulation and arterial suture or anastomosis with a vein is indicated.

Diseases Due to Deficiency in Diet.—Hopkins, in The London Lancet, says that the trend of modern pathology leads to attributing as the cause of any disease, the intrusion of some res noxia, either parasite or poison, even when there would seem to be little reason to expect its presence, as in certain diseases of nutrition. The animal has always been adjusted to live directly or indirectly upon plant tissues which contain countless other substances than protein, carbohydrates and fats, and some of these substances may be essential. However, it required such facts as have come to light in connection with beri-beri to establish any interest in the matter. Here the polishing of rice removed, in the pericarp, a specific substance which caused prominent symptoms to arise. Rigid proof demands the discovery of what the deficiency really is, and shows that its removal results in prevention or cure of the symptoms. What is absent from the faulty dietary may be the necessary raw material for some particular metabolic process, or some harmone which imitates the process. In the case of beriberi and scurvy there is scarcely any doubt that they are due to deficiencies of diet and to those alone.

Owing to the work of Funk, we have considerable knowledge concerning the nature of the substance which is deficient. In considering acute infantile scurvy we find evidence for the influence of a deficiency produced by the artificial treatment of milk. In different foodstuffs the anti-scorbutic substance exhibits varying degrees of stability. Milk contains both a substance inhibiting the induction of beri-beri symptoms and another which is anti-scorbutic. They are not the same, as their stability towards heat is very different, and the relation between milk sterilization and infantile scurvy should be further investigated. The same holds true regarding rickets.

The author then refers to some experiments of his own, demonstrating that young rats absolutely cease to grow when fed upon a diet of purified materials (one essential in the process being thorough extraction with alcohol). On the other hand, if what is removed by alcohol be returned, the animals grow normally again.

Innervation of the Eye Muscles.—Kidd (Review of Neurology and Psychiatry) has very carefully reviewed the literature, and places the whole matter in a very clear light. The Dr. considers the innervation of the sterno-mastoid muscle in conjugate eye and head movements. The writer states in regard to this muscle that "in the year 1910 I stated that there were reasons which suggest that the sterno-mastoid muscle must receive both direct and crossed nerve-fibres. Some eight or nine years ago I read somewhere that it has been shown that the upper nerve path for this muscle is wholly crossed. If this be correct, it must then receive some crossed fibres, because it is both a heteronymous and a homonymous muscle when it helps the other muscles of the left side of the neck to incline the left ear to the left shoulder; this action is performed by the right cerebral cortex acting by crossed certico nuclear fibres on the cells of the left upper cervical cord-segments, which, in their turn, act by the direct fibres which they send to the left muscle. But the left muscle is a heteronymous muscle when, either alone or in conjunction with eye movements to the right side, it turns the face to the right; and this action is performed by the left cortex acting on the right side of the spinal cord, which, in its turn, acts by means of the crossed motor fibres, which it presumably sends to the left sterno-mastoid muscle. If the path just mentioned be denied, then we are logically driven to the conclusion that the upper path for the muscle must be double. It is difficult to say whether the muscle receives a large majority of crossed fibres, because both of its actions are powerful ones, as we can feel on ourselves digitally against resistance. On the whole, however, it seems probable that it is mainly a heteronymous muscle, and therefore receives a majority of crossed fibres. In both respects it would, of course, resemble the two oblique eye muscles. So far as I know, no experimentalist has yet made a careful study, by the retrograde chromolysis method, of the question whether the muscle receives any crossed motor fibres, and the fascinating question of the ganglionic origin of the muscle afferents of the sterno-mastoid muscle—and, indeed, of other neck muscles also—is still an untouched field of inquiry waiting for an enterprising physiologist." His conclusions are: (1) We have embryological, experimental and pathological proof of the existence of direct (uncrossed) trochlearis fibres, ranging from the ancestors of elasmobranch fishes up to man. (2) Direct trochlear fibres are few in number; the crossed have increased enormously in the course of the phylogenetic development. In cat embryos direct trochlear neuroblasts are primary, the crossed are secondary (Martin). (3) We have anatomical, experimental, and pathological proof of the existence of crossed oculomotor roots and fibres in fishes, amphibia, birds, and mammals up to man. (4) All the fibres in each muscular branch of the oculomotor nerve—with the exception of that to the internal rectus muscle—were primitively direct; their crossed fibres are secondary. (4)

The writer believes that the direct and the crossed fibres of the oculomotor nerve are distributed as follows: The inferior oblique receives a few direct and a large preponderance of crossed fibres; the superior and the inferior recti mainly direct fibres, with a few crossed; the internal rectus exclusively crossed fibres, all of which come from the contralateral oculomotor nucleus; the levator palpebrae superioris probably a large majority of direct and a small minority of crossed fibres. (6) In all ocular nerves and nerve branches the grouping of the muscle-afferent nerve-fibres corresponds exactly with that of the motor fibres in that nerve or branch; thus the obliques have mainly crossed, the external rectus wholly direct, and the internal rectus wholly crossed fibres, etc., etc. (7) There are no fibres in man or the rabbit going from the abducens nucleus, via the posterior longitudinal bundle to the contralateral oculomotor nucleus or root. (8) The lower (infracortical) mechanism for the lateral conjugate eye movements depends on the ascending vestibulo ocular fibres of the posterior longitudinal bundle. (9) A lesion strictly limited to the cells of one abducens nucleus gives exactly the same signs as one of the abducens root or nerve, viz., a palsy of the homolateral external rectus muscle. (10) A complete cellular lesion of one trochlearis nucleus gives bilateral signs, viz., a slight paresis of the homolateral superior oblique muscle, with an almost complete paralysis of the contralateral superior oblique. (11) Great caution is needed in diagnosing nuclear oculomotor lesions on account of our gross ignorance of the exact muscular destinations of the axons of all its cells. (12) The sterno-mastoid muscle probably receives a majority of crossed fibres, a minority of direct; this applies both to its motor and its muscle-afferent fibres. (13) A renewed experimental study is needed in monkey, cat or dog; the rabbit should not be used. (14) As the upper path from the cortex cerebri to the nuclei of the eye muscle nerves and to the nuclei of the motor nerves of the sterno-mastoid muscle is believed to be wholly crossed, the lower path has to be a double one to the two obliques and the upper and lower recti muscles of the eye ball, and also to the sterno-mastoid muscle. If it were not so, the eye movements could not be carried out in the way we know they are performed. If, however, the upper path were double, a single lower path would be sufficient, and there could then be no possible need for any crossed fibres in either the oculomotor or the trochlearis nerve.

A Case of Coffee Poisoning.—Sterne (Gazette Medical de Paris) reports the case of a woman of 46, who on July 17 took, for the purpose of bringing on her courses, 250 Gm. of coffee in 200 Gm. of water—a remedy held in honor for that purpose, so it seems, in Switzerland. Within half an hour the woman began to experience a sense of formication all over her body, then nausea, cramps, and fainting spells followed at short intervals, together with extreme vertigo, which did not permit her even to open her eyes. When the doctor saw her, two hours later, she was very pale, cyanosed, extremities cold, and pulse slowed to 44, compressible and irregular. There was suppression of urine, which lasted until the next day; when finally examined it was found free from albumin. From time to time the woman complained of violent pain in the epigastric region, with pyrosis, dryness of the mouth and coating of the tongue. Constipation absolute. Nothing abnormal noted about the genital organs. Upon the 19th menstruation appeared, and the flow was abundant and painless.

He computes the amount of caffeine taken by this woman and concludes that she must have swallowed between 40 and 80 grains of the pure alkaloid, besides the empyreumatic oils and other possibly toxic substances. The woman made a good recovery. The doctor calls attention to the fact that while the drug has some popular repute as an emmenagogue, and probably induces some pelvic congestion in women, among men it is considered an anaphrodisiac, and is even prescribed to control priapism.

Emetine and the Specific Serum in Dysentery.—Chauffard (Presse Medical) says that serum therapy has proven exceedingly satisfactory in bacillary dysentery, at times reducing the stools within twenty-four hours, from as many as 140, to 0; while, on the other hand, emetine was absolutely without effect. However, in the amebic variety, the results obtained from emetine were, as he puts it, "brilliant." Furthermore, one important function of emetine is, that it acts as a prophylactic, in that it prevents the formation of abscess of the liver, while also favoring cicatrization of the ulcers, by destroying the amebas. He injects 0.8 milligram (gr. 1-40) twice a day, at first; increasing this dosage later to four times daily.

He further reports the cure of large dysenteric liver abscesses by means of emetine. One such ulcer had broken into the lungs, and the patient expectorated about 500 Cc. of putrid matter, while his temperature ranged around 98.5° to 100°. This man, aged 21, received six injections of 0.4 gram

(grs. 6) within five days, when the expectoration disappeared, and on the seventh day the temperature was normal. Recovery was normal.

In the same journal, Flandin and Dumas publish similar successes in serious liver abscesses. In these, after suitable operation, the patients received doses of 0.08 gram on four successive days, and 0.04 gram in three days, respectively. Besides, the cavity, in one case, was injected with a solution of 0.08 gram of emetine in 40 Cc. of water.

Treatment of Syphilis with a New Arsenical Preparation Galyl (1116).—Zelenew (Russian Journal of Cutaneous Diseases) reports eight cases of syphilis treated with Galyl injections, 20 tubes of which had been sent him by Professor Mouneyrat. Galyl is a tetraoxydiphosphaninodiarsenobenzene chemically.

Zelenew comes to the following conclusions:

(1) The new French preparation by Professor Mouneyrat, representing a union of arsenic and phosphorus, can be looked upon as of equal merit with the German preparations "606" and "914."

(2) The curative effect shows a negative Wassermann reaction for more than six months.

(3) Galyl rapidly diminishes the Wassermann reaction.

(4) The general condition of the patient, his weight, and blood are favorably influenced. Hemoglobin increases as does the number of red blood corpuscles. Leucocytes, too, improve qualitatively.

(5) There exists a toxic effect (congestive). Zelenew observed elevation of temperature (not high); headache two hours after injection, sometimes of short duration, sometime prolonged. (In only one difficult case did this symptom appear at once.) Vomiting occurs regularly after 3-4 hours; liquid stool 7-8 hours after injection (prolonged enteritis in one case); general weakness so that patient was unable to leave bed was observed in one case; chills occur as a rule after 2 hours; sweating.

(6) The dose proposed by the discoverer for 8 day injections must be changed to suit individual conditions.

(7) Injections of neosalvarsan (intravenous) following Galyl injections produced no complications.

(8) In cases complicated by gonorrhea, neither Galyl nor salvarsan have any influence on the gonococcal infection.

(9) In Galyl we have a preparation in many respects superior to salvarsan (influence on Wassermann reaction, cutaneous diseases, etc.).

Recurrent Intussusception: The Report of a Case Which Was Operated Upon Three Times.—Turner, in The London Lancet, first reported upon this patient in June, 1907, the child being then eight months old. On the preceding day the baby had vomited and was restless during the night. About 4 a. m. he awakened and the mother thought he looked pale and ill. The bowels moved and blood was noticed on the napkin. A doctor saw the child at 11 a.m., found intussusception by rectal examination, sent the child to the hospital at once, and operation was performed at 1 p. m. "The invagination extended from the ileocæcal valve to the rectum; the appendix was not invoived, so that it was of the ileocolic variety. Reduction was effected by manipulation. * * * The lower end of the ileum was found to be much thickened, and there was a very definite indentation at one point, while the glands in the mesentery were enlarged."

On October 8th, 1907, at 3 p. m., the child had an attack of abdominal pain and passed blood. A mass could be felt in the epigastrium but nothing per rectum. Operation at 9 p. m. disclosed intussusception of the same variety as before, but the ileum had progressed only as far as the middle of the transverse colon. "The lower two inches of the ileum were very much congested and thickened, and felt almost as though there might be a polypoid growth inside. The bowel was opened at this point and a small portion removed for microscopic examination; there was no polypus, but the wall was much thickened. At the same time an enlarged gland was removed from the mesentery." These showed inflammatory œdema and congestion. No examination made for tubercle bacilli. "In the hope of preventing a recurrence of the invagination the lower four inches of the ileum was stitched closely to the cæcum in front of the mesentery, interrupted suture of fine chromicized catgut being used."

On May 30, 1908, the patient was admitted to the hospital for the third time. On the previous day the mother noticed that he held the abdomen rigid, but there was no vomiting or other untoward symptoms until two hours before admission, when he passed blood and vomited, and from that time there had been continuous straining and further vomiting. Mass felt in the abdomen; nothing per rectum. Same invagination as at second attack; easy reduction. "The suture of the ileum to the cæcum had not held firmly, though there were long flimsy adhesions between the two. There were two or three undoubted tuberculous ulcers in the ileum, with tubercles on the peritoneum over their site; and one of these,

that nearest to the ileo-cæcal valve where the bowel had been previously incised, had formed the apex of the intussusception, as it was very much indented in its center and much thickened. There was also a large mass of tuberculous glands in the mesentery of the lower ileum. In order to short-circuit the affeeted intestine, and also to provide against recurrence, if possible, a lateral anastomosis by direct suture was made between the ileum above the ulcers * * * and the transverse colon. * * * "The gland and piece of bowel removed at the second operation were re-examined, but there were no appea ances that might fairly be interpreted as being due to tubercle."

The doctor thought that the thickened, indented area in the last few inches of the ileum probably represented an early tuberculons invasion of the bowel wall, and in several he has noticed tuberculous glands in the mesentery. "In the case under discussion the condition at the second operation strongly suggested tubercle and the findings at the third operation left no doubt as to the tuberculous factor in this particular case." The writer says that if an early tuberculosis is commonly the cause of intussusception, "it may also explain the infrequence of recurrence, because of the well-known influence of laparotomy on abdominal tubercle." He does not think any special means should be taken to anticipate recurrence except removal of causative factor if one is found.

Diagnosis and Treatment of Gun-Shot Wounds of the Spleen.—Michelson (Deut. Zeit. fur Chir.) says that about 80 cases of gunshot wound of the spleen have been reported, yet this subject has as yet been relatively little elaborated, because in no case has any one surgeon had an opportunity to study more than a few cases. He reports 10 cases from tha clinic of von Bergmann in Riga. The diagnosis of penetrating wound of the spleen offers the most difficult problem in the surgery of this organ, and it is frequently impossible to arrive at a definite conclusion. It is not safe to rely upon the position and direction of the wound, as is shown by one case in which the wound of entrance was in the fourth intercostal space, yet the spleen had been penetrated.

Another difficulty offered by wounds of the spleen is that frequently there is very little early bleeding. Also frequently the symptoms of injuries to neighboring organs come into the foreground to such an extent that in some cases wounds of the spleen have been overlooked even at operation.

Isolated wounds of the spleen as the result of gunshot have been reported in only seven cases, one of which was a case of the author's. In the great majority of patients there are, in addition to the injuries of the spleen, wounds of the stomach or small intestine; fortunately, as a rule. paradoxical though it may seem, welcomed by the surgeons because they removed all doubt as to the necessity of an immediate operation, which is in this way carried out before the strength of the patient has been lost through the loss of blood, which is apt to come on late. The most constant physical sign of injury to the spleen is rigidity to the abdomen, which appeared in all of the author's cases, except one, which was moribund. The symptoms of internal hemorrhage, such as paleness, heart weakness, dulness in the abdomen, pain in the shoulder, etc., were rather inconstant.

Although as stated by Perthes as much as one liter of blood may be poured out amongst the intestinal coils without being physically demonstrable, sooner or later in most cases there will occur dulness on percussion over the abdomen as the result of the accumulation of blood, even in the case of small wounds. Nevertheless in the experience of the author time has not been allowed to elapse before operation for such a phenomenon to develop. Likewise the author's cases have not afforded a means of demonstrating the sign described by Balance, which consists of dulness under the border of the left ribs with the patient lying on the right side.

According to the writer's experience, which covers a considerable number of abdominal wounds, a slowly developing rigidity of the upper abdomen is very characteristic of the accumulation of fluid along the posterior abdominal wall or behind the peritoneum, such as occurs in injuries of the duodenum, the spleen, the pancreas, and the bile passages. It should always be considered an alarming sign, although not an obvious one. The appearance of this physical sign should lead to immediate laparotomy. The incision should be made so as to permit of exposure of the spleen and at the same time allow an examination of all the abdominal organs. As to dealing with the spleen it is certain that splenectomy offers the quickest and most certain method of controlling severe bleeding. This operation seems preferable in all cases in which the spleen or the vessels of its hilus have been much injured. Care must be exercised so that wounding of the pancreas may be avoided on account of the danger of fat necrosis.

So far as suture of the spleen is concerned it does not seem adapted to the cases as a rule. Likewise tamponade does not seem worthy of recommendation because of the danger of the formation of adhesions and of

trouble later on with the scar which is produced. An examination of statistics involved in the cases reported to date shows that splenectomy gives the most favorable result. In his experience the mortality in operated cases was only 33 1-3 per cent., while all cases which were not operated upon proved fatal. In all cases in which gunshot wound of the spleen is suspected operation should be done without waiting for marked symptoms of internal hemorrhage. A gradually oncoming rigidity of the left rectus must be regarded as a strict indication for immediate laparotomy. A method of choice in severe hemorrhage is splenectomy, although in lacerated wounds suture with the line of suture overlaid by omentum may be resorted to. Tamponade should be avoided wherever possible.

Surgical Treatment of Ascites.—Schwarzmann (Deutsche Zeitschrift fur Chirurgie) states that between the years 1906 and 1912 fourteen cases of ascites were treated in Hochenegg's clinic. Two of these were treated by simple omentopexy, four by fixation of the omentum in a preperitoneal pocket, two by fixation of the omentum in a subcutaneous pocket after the method of Narath, four by preperitoneal fixation of the syleen with omentopexy, one by fixation of the left lobe of the liver with omentopexy, and one by omentopexy together with bilateral saphenopexy. Diagnosis was made either at operation or autopsy in all except one case, in which autopsy was refused. In five of the cases the ascites was due to alcoholic cirrhosis of the liver, in two to infectious cirrhosis of the liver, in two to tuberculosis of the peritoneum, in two to interstitial myocarditis, in one to passive congestion of the liver, and in one to tricuspid insufficiency. The advantages of the operation are the reduction of the ascites and in certain cases the permanent removal of the same; the improvement in the general condition of the patient through lessening of the intra-abdominal pressure, rendering the diaphragm more movable and thus improving respiration and relieving the circulation of the blood; improving the function of the liver; and lastly, verifying the diagnosis through autopsia in vivo. The last point appears to be of especial value because of the difficulty in making an accurate clinical diagnosis. For example, in one case in which operation was done under the clinical diagnosis of cirrhosis of the liver the patient died of miliary tuberculosis of the liver, the ascites being due to tubercular peritonitis. In case of cirrhosis of the liver operation must be done early in order to be of value.

The Modern Treatment of Heart Disease in Children.—Cautley (Clinical Journal, London) says that in all inflammatory cases in which there is the least suspicion of rheumatism salicylates and alkalies must be prescribed. The patient is kept in bed on a light milk and carbohydrate diet, fruit and vegetable soups being allowed as a change. Complete rest and a trained nurse are necessary. Blistering or counter-irritants may be used, but are chiefly efficacious in pericarditis. Vaccines and serums are of problematic value. There is hope that, when the organism of rheumatic fever is isolated, an autogenous vaccine may prove beneficial. Cautley does not wish to ignore the extremely valuable work done in this connection, but, though realizing that many observers are agreed that the genuine organism has been already discovered, there seems to be at present a disinclination to accept it as absolutely proved. In infective endocarditis—fortunately infrequent in children—his experience with vaccines and serums has proved unsatisfactcry. It is difficult to grow the incriminated organism from the blood, difficult to prove that the organism obtained in cultures is the one causing the disease, and difficult to obtain good results from an autogenous vaccine or from a polyvalent serum.

Recourse is sometimes had to paracentesis for the relief of pericardial effusion. It is rarely essential in rheumatic pericarditis, for even the largest effusions may be absorbed. It is a point for discussion whether the operation would promote more rapid recovery. For purulent effusions the pericardium must be opened and drained. Another and more modern operation, sometimes called cardiolysis, is resection of the rib cartilages over the cardiac area, for the relief of general adhesions of the pericardium, The treatment of cardiac failure and backward pressure is the same at all ages. For extreme edema of the lower limbs multiple punctures and sterilized dressings are more satisfactory than the insertion of Southey's tubes. Iron and glycerophosphates are given when compensation is established. Compensation is maintained by regulation of the mode of life, diet, sleep, hygiene, and exercise. These patients must not be allowed to become chronic invalids. A more just appreciation of their capabilities is now general in comparison with the views held by the past generation. If there is merely some mitral regurgitation, the only precautions necessary are against rheumatism and overstrain. Such children ought not to take part in football, races, steeplechases, and like competitions. They may take part in other varieties of exercise, during which they can stop as soon as they feel

any cardiac discomfort. If compensation is less complete, more care is needed. The diet must be regulated, the bowels kept open, and the general health attended to. A weekly dose of blue pill or calomel, and digitalis once a week or more frequently over a long period of time, will often maintain and even increase the degree of compensation.

In every case it is essential to recognize the cause and differentiate the type of cardiac disease, and clearly to understand its probable course and prognosis. Our methods of treatment do not differ markedly from those of the past, but the writer thinks we may claim that they approximate more accurately to the needs of the particular patient, that we appreciate more clearly the necessity for prolonged rest and great care during convalescence, and that we do not hold such gloomy views as to the prognosis in heart disease.

Local Treatment of Vincent's Angina with Salvarsan.—Rolleston (Proceedings of the Royal Society of Medicine) states that salvarsan was first used intravenously in Vincent's angina (Ehrlich, Gerber, Rumpel), but Citron, who has tried both methods, has found that direct application is much the most efficacious; the action of salvarsan on the buccal spirochætæ being only transitory when it is given intravenously. Though in some cases—e.g., that which Rolleston last reported, a policeman suffering from diphtheria—Vincent's angina may be associated with considerable constitutional disturbance, in the present case the disease was entirely local. Active treatment, however, was required owing to the failure of other methods and the possibility of destruction of the uvula or even of fatal hemorrhage, of which Delsaux has recently recorded an example.

The local treatment of Vincent's angina by salvarsan may justly be described as simple, safe, and sure. An objection to its expense has been made. Thus Lebenthal states that a case of mercurial stomatitis so treated cost 10 fr. a day, that ten days were required before the cure was complete. In the present case the expense was considerably less, little more than two shillings' worth of the drug being used. After this patient had been discharged from the hospital Rolleston received a paper from Dr. Delsaux, of Brussels, who recommends a blood examination in every case of Vincent's angina as a guide to treatment. He urges that in cases in which anemia is pronounced intravenous injection should be associated with local applications of salvarsan. No examination of the blood was made in this case. The writer says that a child who lost her uvula developed leucocythemia and died four months after her recovery from Vincent's angina.

Salvarsan has also been used topically in other localizations of Vincent's organisms —viz., ulceromembranous stomatitis, noma mercurial stomatitis, and balanoposthitis— as well as in other conditions unconnected with syphilis, such as soft chancre and varicose ulcers.

Infection by B. Coli in the Puerperium. —Simson and Bernstein, in The British Medical Journal, state that the possibility of autogenous infection is now well recognized. Bacteria which normally inhabit certain parts of the body as saprophytes can, under favorable conditions of environment, acquire virulent characters, so that one finds the streptococcus or the B. coli or the B. pyocyaneus (a less frequent inhabitant of the alimentary tract) at times settling down on a diseased endocardium or kidney or other part of the urinary tract and initiating pathological processes. It may be granted that the organisms are constantly entering the blood stream in some numbers, but under ordinary conditions of health are easily overcome by the defensive agents. But sometimes these bacteria may settle down to a saprophytic existence in parts of the body usually free from them, so that it is possible for the B. coli to live in the female bladder for long periods without producing any disturbance. Where there exists disease of the bladder or the kidneys the manifestations are fever of indefinite duration, often rigors, and invariably the urine is of high acidity, containing pus and swarming with bacilli. The urine is so acid as to produce scalding in passage. Though the pyrexia may continue for some time, the patient does not manifest general symptoms of such severity as are met with in septicemia; nor can micro-organisms be found in the blood stream by cultural methods. The condition is one of toxemia. There is but slight leucocytosis, though in more extensive disease of the kidneys, where abscess formation is advanced, this may be more marked. The results of treatment may be summarized under three groups: (1) Cure may result and the bacilli disappear from the urinary tract; (2) the symptoms may be relieved and the bacilli disappear so long as the patient is kept under treatment, but it will be necessary to give prophylactic doses of vaccines at increasing intervals of time; or (3) the condition may subside and the bacteria continue to inhabit the bladder as harmless saprophytes. The result of vaccine treatment is as a rule, rapid, and even after the first dose the temperature may even fall and the toxic symptoms be

relieved, while the bacteria may disappear from the urine. But even so, one must be guarded in giving a prognosis of rapid return to health or in discontinuing the treatment too soon; for, though it is easy to control the bacterial activity, in some cases it is difficult and occasionally impossible to entirely inhibit them. Consequently the vaccines should be continued in increasing doses at increasing intervals of time for several weeks and the further treatment should be controlled by periodical examinations of the urine.

Acute Epidemic Poliomyelitis.—Kling and Levaditi (Ann. de l'Instit. Past.) have been carrying on some further experiments with the virus of this disease. The fact that epidemic poliomyelitis seems, during its rapid evolution in a relatively circumscribed focus, to make a kind of selection of the individuals to be attacked, suggested testing the serum of those who, though exposed to the disease equally with others attacked, have apparently escaped infection. Since the serum of monkeys cured of infantile paralysis can neutralize in vitro the virus of the disease, blood was taken from persons who had been in contact with acute cases, and was tested in this way. In a number of instances, the virus was neutralized and the monkey infected with the mixture failed to show any signs of the disease, in contradistinction to others similarly treated, but in which undoubtedly normal serum had been employed. Unquestionably, then, many more persons suffer from infection by the virus that manifest signs of the disease.

Treatment of Gastric Ulcer.—Loeper (Progres medical) says that in cases of gastric ulcer in which there is a high degree of intolerance of food, intense pain being usually awakened when anything is ingested, sugar is in many instances the best nutrient available for oral use. Pavloff has shown that sugar does not excite gastric secretion, and it is also known that sugar, introduced into the stomach, passes out from it very rapidly—much more rapidly than even light soups, meat jellies, and especially milk, which leaves the stomach only an hour or more after ingestion. Sugar is moreover a readily absorbable and combustible food; 3.5 ounces of it supply 400 to 500 immediately available calories, or as much as 1¼ quart of skimmed milk, six eggs, etc. A patient who had lost 5 kilos. in weight in six days on a diet of milk and starchy products began to gain when an equivalent (only 400 calories) amount of sugar was given. Urine analyses in both man and dogs showed that sugar spares the protein constituents of the tissues better than other carbohydrates, and also spares the fats.

The doctor's patients were given sugar in the amount of about 3.5 ounces per diem, either in a simple syrup or in various fruit syrups, together with fruit jellies, lemonade or orangeade, fresh grape juice, etc. In previously very intolerant cases, all gastric pain, nausea, and vomiting disappeared, and the body weight, as already noted, began to show a gain. In a few instances, slight fermentative disturbances were induced, but these were only exceptionally such as to inconvenience the patient. In view of the low percentage of mineral constituent supplied in the sugar diet, it may be advantageous, Loeper points out, to give the patient also a few powders of sodium and calcium phosphates.

The exclusive sugar diet should not be continued longer than five or six days, as it affords material only for immediate combustion and not for tissue repair. As soon as the gastric condition permits, the amount of sugar should be diminished and a few light articles of food substituted, e.g., carrot or arrowroot bouillons, potato soup, sweetened albumin water, milk soup or diluted milk, later undiluted milk, pastes, meat jelly, fresh fish, and white meats.

Treatment of Supplementary and Vicarious Menstruation.—Emile-Weil (Journal de medecine de Paris) reports four cases in which menstruation was accompanied by bleeding from the nose and gums or purpura, as well as two cases of true vicarious menstruation. Describing the treatment, he advises that the patient be required to stay recumbent from the beginning of the period until at least one day after the bleeding has entirely ceased. Hot injections should be given morning and evening throughout, and constipation carefully avoided by giving mild laxative drugs or small enemas. In severe cases he injects five drachms of horse serum subcutaneously on the second day of menstruation, while in less pronounced cases the same amount of serum is administered by rectum on the second, third, and fourth days. This measure can be resorted to every month without inconvenience. In certain cases, he has applied a wad of gauze dipped in serum directly to the cervix, often with immediate arrest of the hemorrhage where hemorrhage has existed (though at times the bleeding was increased). In grave cases he now administers whole blood secured from the vein of a relative of the patient.

To prevent the return of pathological hemorrhage at the regular monthly intervals is difficult. Thyroid organotherapy,

beginning with small doses such as three-fourths grain, later to be increased, should be tried, though in the author's experience it has not proved very effectual. In several instances, on the other hand, mammary and pituitary medication was observed to produce a favorable effect on the hemorrhage. Iron, arsenic and other tonics should also be prescribed.

An Inagglutinable Strain of B. Typhosus.—McIntosh and McQueer (Journal of Hygiene) have been working on the immunity reactions of an inagglutinable strain of B. typhosus obtained from the blood of a boy who was suffering from typhoid fever. The organism agreed in all particulars with typical B. typhosus, with the single exception that it was not agglutinated by anti-typhoid serum. Their experiments show that by injection into rabbits specific agglutinins against typical B. typhosus can be obtained, though not to itself except in a very slight degree; that group-agglutinism to other members of the typhoid-colon group can be thus obtained; that the organism in question can absorb the agglutinins for both homologous and heterologous antisera; and that its antigenic properties as regards fixation of the complement are not impaired. They consider that it owes its peculiarity to some alteration of a physical character rather than to a loss of receptors.

Uterine Hemorrhage.—Whitehouse, in The London Lancet, says that owing to the variable amount of secretion from the uterine glands we have no means of accurately determining the amount of blood actually lost, except by the presence of clots and by the clinical effect upon the patient, The presence of clots indicates either, that the uterine secretion is deficient in thrombolysin, that there is too much blood present for digestion by the available enzyme, or that the blood escapes from the surface too rapidly for proper contact with the enzyme. The factors for the production of excessive bleeding may be divided into three classes. The first includes those relative to the endometrium. There may be either a diminished thrombokinetic power of the secretion of the endometrium so that there is insufficient clotting of the blood in the mouths of the vessels to check the hemorrhage, or there may be an excess of secretion of thrombokinase with resulting rapid digestion of the clots formed and an opening of the vesseis by removal of the closing clots. There is clinical evidence of the occurrence of both factors, and in cases of excessive bleeding an examination of the uterine contents during the bleeding is of the first importance in determining the exact cause of the condition. In this examination one should determine the presence or absence of clots in the vagina; the formation of clots in the fluid after standing; the thrombolyfic power of the secretion; its calcium content; and its microscopical character with special reference to the amount of tissue destruction. The second group of causes relates to the action of the endocrin glands, particularly the ovary. An excessive activity of this glahd undoubtedly leads to a hypertrophy of the glandular elements of the endometrium, and this, in turn, to an excess of secretion of thrombolysin. The last group includes those factors which lead to an abnormal degree to pelvic venous stasis. Frpm these considerations the treatment will obviously differ with the cause of the condition. Whitehouse does not believe that the use of the curette has any curative value in the great majority of patients, but it is often of great service in completing a diagnosis. The doctor says that in certain cases the removal of a portion of the ovarian tissue is the logical method of treatment, while, in others, the use of thrombokinase, obtained from testicle or endometrium, will be followed by good results. The excessive bleeding so often encountered at the time of puberty or the menopause is probably due to a disturbance in the balance between the several factors in the control of hemorrhage, and seldom needs any treatment.

Miscellaneous.

Auto-Intoxication.

While the subject of auto-intoxication is still but imperfectly understood, yet sufficient facts have been discovered, which should enable the skillful physician to diagnose it readily and to realize that, if not promptly and successfully treated, many serious and abnormal conditions will develop.

Auto-intoxication occurs in one of several ways:

1st. By the retention of those secrettons, which arise from imperfect elimination of the normal products of metabolism.

2nd. By the resorption of those elements, which arise from the entrance of decomposed products of intestinal origin into the general circulation.

3rd. By infection, or auto-toxemia, due to toxins caused by micro-organisms in their warfare with the leucocytes of the blood.

4th. By dyscrasia, an auto infection, which results from an abnormal condition of the blood or a perversion of tissue meta-

morphosis.

It is now a well recognized fact that many diseased conditions are the direct result of one or more of these forms of auto-intoxication. The first form of this toxemia is often called self-poisoning, because it is due to an accumulation of natural waste in the system.

Every muscular contraction, every formulated thought, every movement of an eye lid, every breath we breathe, causes the death of cell life. These dead cells and the various poisonous gases that accumulate as waste material, if not properly eliminated, become deadly poisons. Nature has arranged that these poisons be thrown off through the various organs of elimination, as fast as elaborated. All dead elements occurring within or absorbed from without, if allowed to accumulate, poison the proteids or bi-plastic cell substances, in which reside all vital-energy, all cell-resistant force, and through which all animal nutrition takes place. This is why auto-intoxication is so far-reaching and its results so very disastrous. It is easily understood that when this cell life or vital resistant force is weakened and the process of nutrition ungoverned, before long the whole machinery will get out of working order, and disease be the result.

Not only is the vital cell life and process of nutrition involved, but auto intoxication interferes with and prevents the necessary leucocytosis. The system is then less able to take care of itself, because of this weakened condition of the leucocytes, those white blood cells, the guardians of the blood-stream and the natural defenders of the human organism, which, in a healthy person, are ever ready to combat disease and to arrest and overwhelm all alien or disease producing germs.

These combined conditions soon produce such morbid changes in the animal economy that, as the result, we may have a long list of diseases, such as rheumatic and gouty affections, various neuralgias, tonsillitis, diabetes, Bright's disease and numerous nervous disturbances. It is now known that neurasthenia may have auto-toxemia for its underlying cause and, if this be true, the plan of treatment is plain.

It is a foregone conclusion that thorough elimination is the only method by which these grave changes in the animal economy can be corrected. The bowels, the liver, the kidneys and the skin must be stimulated by a proper performance of their various functions. In this way and in no other can we hope to cure or even ameliorate the diseased conditions, dependent upon auto-intoxication.

In mapping out lines of treatment for such ailments, the central idea should be to select a remedy or remedies that clinical experience has proved to be an eliminant of the first order. With this can be combined tonics, alteratives and other indicated agents.

The very successful experience which thousands of physicians have had with Tongaline for over 30 years demonstrates that it is the most effective eliminant known to the profession. When administered with good judgment, Tongaline exerts a stimulating effect upon every organ of elimination; cleansing the complex sewerage system and putting it into working order. When this is done the sluggish blood current begins to flow more freely; the lymphatic and glandular systems to give up and carry off the toxic products, so long retained; the shattered nervous system to feel the impetus and to exert its governing power; nutrition, so long delayed, gives tone and strength to the patient, and soon the whole complicated machinery is set in motion, resulting either in the great improvement of the diseased condition or a thorough cure.—C. W. Canan, M. D., Orkney Springs, Va.

A Few Examination Questions of the Louisiana State Board of Medical Examiners.

ANATOMY.

1. Name boundaries, anterior and posterior, of axilla.
2. Describe the thoracic duct.
3. Give origin, and structures supplied by the glossopharyngeal nerve.
4. Describe the Y- or iliofemoral ligament.
5. What is connective tissue? Where is it found?
6. Name ligaments of ankle joint.
7. Describe the pleura.
8. Describe the arteries and veins passing to and from the kidney.
9. Give component parts of spermatic cord.
10. Describe the relations of the peritoneum to the bladder.

PHYSIOLOGY.

1. What is invertin, and what part does it play in digestion?
2. What is an internal secretion? Name the more important organs concerned in the process of internal secretion.
3. What are the principal waste products of metabolism and through what channels are they excreted?
4. What are the average proportions of the principal constituents of normal human milk?

5. What kind of nerve impulses are carried through efferent and afferent nerve fibers?

6. What is the result of injury to, or removal of, the semi-circular canals?

7. Name the nerves concerned in the constriction and in the dilatation of the pupil of the eye.

8. State briefly what is understood by diapedesis and phagocytosis.

9. What factors are concerned in the second sound of the heart and where is this sound best heard?

10. Relative to external respiration, state briefly what is understood by (a) tidal air, (b) complemental air, (c) reserve air, (d) residual air.

CHEMISTRY.

1. What are the principal allotropic forms of carbon?

2. How does carbon dioxide act as a poison?

3. What is an unorganized or soluble ferment?

4. Name the soluble ferments of the body.

5. What are the tests for starch?

6. What caution should be observed in esting urine for sugar?

7. What are ptomaines, and name some of the best known ptomaines.

8. What is the principal salt of silver used in medicine, and what are the properties of this salt?

9. What are fats, and name the principal animal fats?

10. (a) Is elementary arsenic poisonous? (b) How does arsenic prove poisonous? (c) Which is the most common poisonous compound of arsenic?

PHYSICAL DIAGNOSIS.

1. What are the types of normal respiration, and what conditions would cause alterations of same?

2. What conditions influence the production and variation of pitch?

3. Define dyspnea, and state the types and causes of same.

4. Summarize the points of differentiation between pleuritic friction sounds and bronchitis.

5. Describe the natural heart sounds, and the causes of each.

6. Describe the characteristics and significance of the various kinds of arterial pulse.

7. What are the physical signs of pericarditis with effusion?

8. Differentiate cardiac hypertrophy and cardiac dilatation.

9. Give the physical signs of combined aortic and mitral insufficiency.

10. Describe the physical signs of ascites and those of cystic disease of the ovary.

PATHOLOGY.

1. (a) What is an infarct? (b) What is an anemic infarct? (c) What is a hemorrhagic infarct?

2. Describe the process of healing of wounds by first intention.

3. Name the different forms of pus producing cocci, and state which of these are the most virulent.

4. (a) What is suppuration? (b) What is leucocytosis?

5. What changes occur in joints following gonorrheal metastasis?

6. Describe the pathology of acute osteomyelitis.

7. What are the pathological changes found in the small intestine in typhoid fever?

8. Describe the gross pathology of acute lobar pneumonia.

9. Describe the pathology of pyonephrosis.

10. Describe the pathology of arteriosclerosis.

THERAPEUTICS.

1. (a) What are mydriatics? (b) Name them.

2. Name the principal drugs used for the reduction of blood pressure.

3. (a) What are cardiac stimulants? (b) Name some of the best known drugs used for this purpose.

4. Describe the physiologic action of the diuretics.

5. How would you treat a case of acute opium poisoning?

6. What are the antidotes for arsenic?

7. Describe the treatment of valvular disease of the heart with failing compensation.

8. How do substances act by counter-irritation? Name some of the best known counterirritants.

9. Describe the action of antidiphtheritic serum in a case of diphtheria.

10. What are the physiological actions of the salts of cinchona?

OBSTETRICS.

1. (a) What are the causes of prolonged first stage of labor? (b) dangers? (c) management?

2. Discuss in general the principal drugs used to hasten labor.

3. What are the prerequisites, indications and contraindications for the use of forceps?

4. What are the causes of hemorrhage before and after delivery?

5. (a) What conditions necessitate ver-

sion? (b) forceps delivery? (c) cesarean section?

6. Describe a cesarean section.

7. Vaginal examination shows the saggital suture occupying the right oblique diameter; the small fontanelle is felt opposite the right sacroiliac synchrondrosis, the large fontanelle being directed toward the left and front. (a) What is the position of the child? (b) how may the case end? (c) treat the case if nature's efforts are unsuccessful.

8. What changes occur in the fetal circulation at birth?

9. Give the etiology and treatment of subinvolution of the uterus.

10. What is the cause and treatment of frequent urination in pregnant women?

Leukocyte Counts in Cirrhosis of Liver.

Rogers has continued his observations on the blood changes in cirrhosis of the liver, and the results confirm, and in some respects extend, the conclusion that leukocytosis is common in ordinary cirrhosis of the liver, a high degree being of immediate very bad prognostic significance. On the other hand, a marked leukopenia is diagnostic of the disease being secondary to kala-azar. It appears that a relative increase of the white corpuscles is of great immediate prognostic value. Five of the nine patients showing an actual leukocytosis died within a short period of time, while in the six patients showing only a relative leukocyte increase four also died while under treatment in hospital. Thus, out of a total of fifteen patients showing either an actual or relative leukocytosis no less than nine, or 60 per cent., died within a short time, while the remainder were discharged from hospital "relieved," mostly without any improvement in their condition. On the other hand, out of nine cases with no increase in the leukocytes, even of a relative degree, and in which kala-azar was not the primary disease, there was only one death, or 11 per cent., the fatality in that case, moreover, having been from a complicating branchitis. Even among the eight kala-azar cases only two terminated fatally while under observation, so that, including them, there were still only three deaths in hospital, or 17.65 per cent. among seventeen patients with normal or diminished leukocytes. As most of these patients were in hospital from one to three months, and some of them showed improvement as a result of medicinal treatment, it is clear, Rogers says, that, except in the kala azar cases with marked anemia or daily fever, surgical procedures might have safely been adopted in those with recurring ascites after repeated tappings, and who thus did not appear to be likely to completely recover under purely medical treatment. On the contrary, several of the patients showing leukocytosis died within a short time of its discovery, although clinically indistinguishable from many of the more favorable cases with normal leukocytes, and had they been operated on only a disappointment would have resulted. In seven out of nine cases in which an actual leukocytosis was found, from 80 to 93 per cent. were polynuclears, the two cases showing over 90 per cent. being both in a cholemic state which rapidly ended fatally. This polynuclear leukocytosis points to a terminal bacterial infection, very possibly due to the bacillus coli communis. In the kala-azar cirrhosis cases a marked degree of anemia was always present, while the proportion of white to red corpuscles was usually reduced to much below the normal figure of about 1 to 666. The occasional absence of a marked relative leukopenia is due to the fact that cirrhosis is a very late complication of kala-azar, only ensuing after the patient has suffered from fever for several years, and has to some extent become immune to its effects, and partly due to the frequency of dysenteric complications, which tends to increase the leukocytes.—The London Medical Lancet.

Lime in Therapeutics.

Von der Velden limits his discussion of this subject here to the action of calcium salts on the endothelium of the vessels and on the coagulation of the blood. He gave patients 1 gm. tablets of calcium lactate up to a total dosage of 4 or 6 gm. a day. To a few others he gave calcium chloride 0.5 gm. three times a day. In a few cases he gave the lime by intravenous injections of a 5 per cent. solution of calcium chloride. His experience has demonstrated that the calcium enhances the coagulating power of the blood and also renders the morbidly permeable vessel walls less permeable. The latter effect is strikingly evident in hemorrhagic affections, such as scorbutus; the calcium renders the vessel walls less porpous. This hemostatic effect therefore can be anticipated only in case of bleeding by diapedesis. It is unfortunate that the absorption of the calcium salts depends on a variety of factors, especially on good gastric secretion and on the absence of fermentation acids in the intestine. He detected the abnormal permeability of the vessels responsible for the rebellious scorbutus hemorrhage in one case by applying a cupping glass for five minutes. The vacuum glass drew blood just the same after two weeks

of the ordinary measures. Then he gave the man 3 gm. a day of calcium lactate for five days, after which the cupping glass no longer drew blood, and complete recovery followed in three weeks of the same treatment. He also found calcium lactate useful in two cases of iodin poisoning from a course of potassium iodid. A futher useful application of the calcium lactate is in curing the cutaneous manifestations of anaphylaxis. In pleurisy with effusion the fact that the calcium renders the vessel walls less pervious has an unfavorable side, as this checks absorption. The calcium is indicated, therefore, only when the effusion constantly recurs after puncture. When the walls of the pleura are severely modified by chronic inflammation, the calcium will naturally have no effect. He found that animals developed cachexia when given calcium salts over a long period. In fifteen cases of hemorrhage nephritis the results of the calcium medication were conflicting. No pronounced favorable results were obtained in any case and the condition was aggravated in some.—Therapeutische Monatsheft.

Treatment of Ankylostomiasis.

A point of great importance in the successful treatment of ankylostomiasis, in Keith's opinion, is the percentage of hemoglobin in the blood. If the percentage of hemoglobin is in the neighborhood of 60, he says it may be reckoned that with suitable treatment the ova will disappear in the course of a few days. With a percentage of between 45 and 55, treatment will be more difficult. Anything below 40 per cent. will indicate that great patience will have to be exercised before recovery can take place; it will not be a question of weeks but of months, and this is certainly so when the percentage of hemoglobin is as low as 10 to 20. The general condition improves with rest and diet. As a rule, the edema soon disappears and the patient feels better, but the ova, though they decrease in number rather quickly at first and then more gradually, do not disappear entirely for months, while the hemoglobin index remains persistently about its original level. From recent results, Keith has come to the conclusion that betanaphthol in 30-grain doses the first thing every morning is likely to prove more effectual than eucalyptus or thymol. The necessity for starving patients while the treatment is being carried out is by no means evident; indeed, in bad cases it may even be harmful. More especially is it unnecessary if the drug is given the first thing in the morning. There will not be much food found in the upper part of the small intestines five or six hours after an ordinary meal, so that if the drug be given the first thing in the morning there is no necessity for starvation. Energetic treatment is needed, and Keith has never seen any ill-effects follow from such measures.—The London Lancet.

Insomnia and Its Treatment.

Monin (La Semana Medical) says that nocturnal repose is the repose that restores strength, sustains physical resistance and promotes assimilation. Sleep signifies and corresponds to a need of conservation which cannot be evaded. Insomnia, therefore, inevitably leads to denutrition and debility. Eight or nine hours of sleep are needed every day, or about one-third of human life; this period of inaction in which we are far from contact with the outer world (only the organic functions and the reflexes remaining active), represents a physiological need for every living being. It is also probable that sleep favors the elimination of certain products of retrograde metamorphosis (toxins, the homogenic bodies of Preyer), the accumulation of which in the system causes inhibition of function and fatigue.

Insomnia calls for different remedies, according to the causes that produce it. Cerebral insomnia is relieved by chloral, trional and veronal, and avoiding opiates when there is any congestion.

Medullar insomnia is quieted by granules of monobromid of camphor, narcein, codein, or Gregory's salt; and when there is congestion of the medulla, hyoscyamin produces very good results, as in tabes, paraplegias, etc. Equally we should avoid opiates in bulbar insomnia, because they often aggravate the asphyxia. For the relief of pain that prevents sleep, e.g. neuralgia, we advise the use of aconitin, cannabin and kenarol, using the last named particularly when there is fever. Ergotin and cannabin are useful in insomnia from mental causes; spartein, bromide of camphor and valerianate of quinine are valuable in patients suffering from cardiac troubles

Sleep is the true antidote to alcoholic intoxication. The insomnia of neurasthenics, when persistent, can be cured by open-air life at an elevation, cold douches to the feet and suppression of all stimulants, which are always anti-hypnotic; furthermore, in these cases narcotics are always uncertain and never produce a beneficial sleep, while a reform in the patient's hygiene frequently suffices to secure the repose that he needs and yearns for.

In cases of hypotension, Dr. Manon advises a lotion of lukewarm water and vinegar over the whole body, and a cup of hot

beef tea internally. When there is habitual hypertension, Monin gives a sixth of a grain of calomel at each meal, and a minute dose of veratrin at bedtime, with two drops of the officinal solution of trinitrin. This treatment always gives good results. In chronic constipation, with insomnia due to absorption of toxic products, an enema and a Seidlitz powder every morning will soon restore what Lasegne aptly terms the "appetite to sleep."—Revista de Medicina y Ciruja de Habana.

Validol in Pediatrics: Also in Oxyuris.

Neubauer says that since the introduction of validol in 1897 it has become very widely used. It consists of the isovalerianester of menthol plus 30 per cent. of menthol itself. The valerianic acid marks the remedy as a nervine, and the menthol as an analeptic. From this arises its varied applicability to many kinds of nervous disorders, in cardiac pains without valvular deficiency: also in seasickness, vomiting of pregnancy, in certain cases of migraine, in acute alcoholism and as an intestinal disinfectant in Oxyuris vermicularis. It did not, however, sustain the claim advanced for it as a succedaneum to digitalis.

In pediatrics, Neubauer found it a prompt remedy in night-terrors, and also a reliable anthelmintic. From five to fifteen drops at night quieted the nervousness and the oxyuris disappeared from the stools. The explanation of this anthelmintic action is to be found in the fact that menthol belongs to the cymol derivatives, like thymol, which has long been used in the treatment of hookworms.—Deutsche Medizinal Zeitung.

Pathogenesis and Therapy of Genuine Epilepsy.

Bolton (Nederl. Tijdskrift f. Genesche) says that epilepsy is a toxicosis caused by the products of molecular changes of the cells, and retrograde products of foodstuffs. All of the substances are neutralized by the thyroid and parathyroid bodies. Insufficiency of these organs depends on disturbance of the lowest sympathetic ganglion. The cerebral changes in genuine epilepsy are secondary, and are due to chronic toxemia. Genuine epilepsy, in many cases, cannot be clinically distinguished from a symptomatic epilepsy which is a sequel to meningitis or meningoencephalitis. The administration of freshly expressed thyroid juices by the rectum has given excellent results in genuine epilepsy. Of forty cases so treated, eight were cured in a short time; others required months of treatment, during the first two or three months of which absolutely no improvement was noted. Only two patients failed to derive any benefit; but in these two cases there were already well-marked secondary phenomena and pronounced dementia.—Deutsche Medizinal Zeitung.

Treatment of Herpes Tonsurans.

Tincture of iodine in combination with soft soap or spirits of soap has proven a most efficacious remedy for herpes tonsurans but only too often an eczema will result. Thedering, therefore, recommends the following treatment: Paint the area every morning and evening for four days with tincture of iodine without the previous use of soap. For the following two days, apply a 3 per cent. salicylic acid salve (acid salicylic 1.0; ol. olivar. q. s., lanolin ad 30.0) to soften the resulting crust. On the seventh day, the softened crust is removed by washing once with soap and water. If necessary, this procedure is repeated. The pustular eczema so often seen is readily avoided in this way, because the use of soap is restricted.—Muench. med. Woch.

London as a Health Resort.

Clippingdale states that London life is to some people their pabulum vitæ—the material upon which they live. This has been markedly shown in the cases of certain men of great mental activity. "The air seems dead in this quiet country," says Meredith. "I must rush up to London to live." "Sir," said Dr. Johnson, when asked to accompany a friend for a walk in the fields, "when you have seen one green field, you have seen all green fields; I prefer looking on men and things—come, let's take a walk down Fleet Street." Johnson was born in Lichfield, and he was fond of visiting his native place; but he always said he felt more at home in London. To him the motley throng of the great metropolis was more congenial than the restricted circle of the small cathedral town. It may, perhaps, be fairly assumed that the output of his great brain would have been restricted had he lived anywhere but in London. Another lover of London and of Fleet Street was Charles Lamb, who writes: "I am naturally inclined to hypochondria, but in London it vanishes, as do other ills. The man must have a rare receipt for melancholy who can feel dull in Fleet Street." Fleet Street does not appear to be at the present day a very attractive street, but among literary men it has been known as the "blue matter of the world's cerebrum." No wonder, then, that men like Johnson and Lamb like it. The fondness for London is not the special attribute of great men, and Londonophilia has shown itself in an extraordi-

nary way in silly people. A wit of the Georgian period had the roadway in front of his country house paved with cobble-stones, in order that he might hear the rattling of carts over them and so be reminded of London. Ford Maddox Hueffer has recorded the case of a Londoner dying at a distance who expressed his regret that he was not passing away in the Underground Railway; and Pett Ridge has told of the servant girl who, leaving London with her family, leaped from the carriage to kiss the last stone of the city.

But if London has its many ardent lovers, it also has its haters, and among the Londonophobists are those whose opinion is worthy of every respect. The depth of their antipathy to the place may, perhaps, be measured by the number of the epithets they use. Heine contents himself with two, calling London the city of "fog" and "porter"; Grant Allen uses five: "seething," "grimy," "opulent," "squalid" and "hungry"; and Ruskin employs six epithets: "foul," "rattling," "growling," "smoking," "ghastly."

But whatever may be its esthetic attributes, there can be little doubt as to its suitability for persons suffering from certain nervous dyscrasiæ; cases, not of true pathology, but of simple digression from normal physiology; cases of hypochondria, melancholia, insomnia, and neuralgia of non-organic origin, the drug and alcoholic habits, and morbid introspection; cases, in fact, requiring the very opposite of a "rest cure." Sir David Ferrier has recently pleaded for what he styles "rational psychotherapy" in such cases; and by "rational psychotherapy" the author understood such means as are provided by the diversions of this great city. Its historic, artistic, and literary associations; its many picture galleries and museums; its numerous places of amusement; the business activity of the city; the attic regions of Belgravia; and the Alsatian retreats of the East End all combine to produce a state of exhilaration not met with elsewhere.—Proceedings of the Royal Society of Medicine.

Medical Bookkeeping.

Collie states that the physician's accounts for the half-year or the year should be summarized in the shape of a profit and loss account and a balance sheet. In this concise form important points are grasped with a clearness impossible in any other way. Many men are apt to think of bookkeeping as an unimportant matter, but upon it may depend one's financial stability, peace of mind, capacity for continuing work, future independence, and provision for dependants in the event of death.—British Medical Journal.

Treatment of Ankylostomiasis.

From a study of 70 cases as to the results of treatment, it became evident to the author that a point of great importance is the percentage of hemoglobin in the bloud. If it is in the neighborhood of 60, with suitable treatment the ova will disappear in the course of a few days. With a percentage of 45 to 55, treatment will be more difficult. Anything below 40 per cent. will indicate that great patience will have to be exercised before recovery can take place; it will not be a question of weeks, but of months. The general condition improves with rest and diet, and, as a rule, the edema soon disappears and the patient feels better, but the ova, though decreasing in number, quickly at first and then more gradually, do not disappear entirely for months, while the hemoglobin index remains persistently about its original level. It appears to be possible that, after all the worms have been killed and expelled, ova may still linger about the intestine. Or, the embryos may not have completed their circuit from the skin to the intestine at the commencement of treatment, and fresh invasions may continue to reach the bowel by way of the trachea and esophagus for some time after. One point having a bearing on the difficulty of treating these cases is the presence of a thick layer of mucus in the upper part of the intestine in severe cases. This must help to protect the worms against the anthelmintic. The subsequent treatment, after one has gotten the worms largely if not entirely expelled, requires great patience.

From recent results the author has come to the conclusion that betanaphthol in 30-grain doses given the first thing every morning is likely to prove more effectual than eucalyptus or thymol. The necessity for starving patients while the treatment is being carried out is by no means evident; indeed, in bad cases it may even be harmful. There will not be much food in the upper part of the small intestine five or six hours after an ordinary meal, so that if the drug be given early in the morning there is no necessity for starvation. It is true that large doses of these drugs given frequently are apt to irritate the mucosæ, but that is no reason why one should refrain from employing them in this way. Energetic treatment is needed, and the author has never seen any ill effects follow.—Keith, in The London Lancet.

X-Ray Treatment of Bone and Joint Tuberculosis.

Experimentally, application of the x-rays

to tuberculous foci causes a degenerative process in the tubercle cells and an inflammatory process in the surrounding tissues. The author does not believe that the tubercle bacilli themselves are destroyed by them. Useful therapeutic results, however, are to be obtained. In employing this treatment the skin must be protected either by aluminum or thick leather, so that only the hard rays will penetrate, Among the author's patients, children less than 5 years old were not rayed. In older children the undiseased epiphyses were avoided, but it seems to the author that surgical procedures in the vicinity of an epiphysis involve more danger of a disturbance of growth than the x-rays.

Good results were obtained whether the synovia were involved or not, buf the best effect was noted in tuberculous fistulæ and in tuberculosis with secondary infection. The part was exposed from all sides to an erythema-producing dose, and three weeks then allowed to elapse before repetition. The joints which healed under the x-rays showed but very slight limitation of motion, and the author is certain no injury was done to the epiphyses. He warns, however, about raying abscesses and fungous conditions, with skin reddened and about to give way, on account of the danger of necrosis. Furthermore, orthopedic and surgical measures must not be omitted. Among the 18 cases which the author treated, a number had been for years refractory to orthopedic treatment, yet healed quickly under the x-rays.

In a 16-year-old girl suffering from tuberculosis of both feet, the right elbow, and the fourth finger of the left hand, only the left foot and diseased finger were rayed. The sinuses in the foot disappeared after two months and the one in the finger after five months, and the finger became useful again; the untreated foot and elbow, however, remained unchanged.—F. von Schede in the Zeitschrift fur orthopadische Chirurgie.

The Active Ingredient of Carlsbad Water.

Bottled spring water and fresh spring water do not possess the same activity since changes in radioactivity and electrolytic disassociation are constantly going on which will result in gradual deterioration. It is likely, however, that some of this deterioration is also of a chemical nature. Schwyzer has carefully studied the waters of Carlsbad and finds that the fresh water is more effective in cholelithiasis than any other water, though its radioactivity and ionization are not any greater. It is characterized, however, by a higher percentage of fluorides, and these fluorides are gradually fixed or precipitated as the water is stored in bottles. It is very likely that at least part of the activity of Carlsbad water is due to these fluorides, and its deterioration is due to the gradual disappearance of these fluorides. The author recommends that the water be filled only in paraffined bottles and stoppered with a paraffined cork so that contact with glass and cork on storing is avoided.—Munch. Med. Woch.

Organotherapy in Chronic Rheumatism and Psoriasis.

Leopold Levi reports the case of a man of 72 in whom severe pruriginous psoriasis and mild chronic rheumatism had come on slowly in a period of seven or eight years after emotional distress, due to the loss of three children. The rheumatism was worst in winter; the psoriasis, in summer. The itching from the latter condition was continuous and prevented sleep. The circinate character of the lesions suggested the possibility of syphilis, but the Wassermann reaction was negative. Signs of hypothyroidism being present thyroid extract was prescribed with rapid benefit to the rheumatism but with none to the psoriasis. As the patient showed breasts of a somewhat feminine type, with sexual frigidity of six years' duration, and also hypotrichosis, the author, remembering that the testis in rich in sulphur and has a marked action on the skin, prescribed three grains of testicular powder daily with rapid benefit to the itching and psoriasis, and return of sleep.—Monthly Cyclo.

Gastric Tetany in the Adult.

Irwin reports thirty-nine cases of gastric tetany in the adult of which eleven recovered. Every drug from calomel to the latest antiseptic was tried. Oddo recommended calomel as a purge every other day, and benzonaphthol in ½ grain doses every two hours as an intestinal antiseptic. Boas recommended the use of diuretics. Gibb used in the treatment of his cases hypodermic injections of morphine and atropine; internally he gave liquor arsenicalis, liquor hydrargyri bichloridi, and sodium salicylate. He also gave a purgative consisting of calomel, podophyllin and extract of belladonna with magnesium sulphate first thing in the morning. Pratt washed out the stomach with boric acid solution and injected morphine hypodermically. Oxygen was also administered, and ether injected hypodermically. Gordon administered 30 grains of potassium bromide and 15 grains of chloral hydrate, but as this had no effect he then gave chloroform, which gave relief for a short time. Numerous authorities

recommend gastric lavage, but this is a rather dangerous procedure, as passing the stomach tabe, even a soft one, very often induces a severe attack of tetany. Others have advised the patient to take a large quantity of water, followed by an emetic, but the author cannot find any case recorded in which this treatment has been successful. The only treatment up to the present that has given hopeful results is operation, but even this has not always prevented a recurrence of this grave disorder, as quite a number of cases have had attacks of tetany during the week following the operation. Rectal feeding for a week before the operation would, in his opinion, overcome this difficulty. The patient should have a dose of calomel and then a saline purgative every morning. Fifteen ounces of peptonized milk should be given by the rectum every six hours, and the bowel should be kept well cleansed by giving a saline or soap enema once every twelve or twenty-four hours, and about an hour before the rectal feed. Oral sepsis must be avoided by daily washing the mouth and cleansing the teeth and gums, and in order to prevent parotitis, at one time a serious complication in cases where rectal feeding has been necessary and food by the mouth had been prohibited, the patient should have a rubber teat to suck. By the above method the attacks become less frequent and less severe, and tend to disappear usually about the third or fourth day of treatment.—British Medical Journal.

Concentrated Injections of Neosalvarsan.

According to Fruhwold the injection of three doses of neosalvarsan 0.6 Gm. in 10 c.c. of water within 10 days will have a prompt effect on syphilitic manifestations of all stages and will cause their disappearance in about two weeks. About two thirds of the cases show after effects, such as fever, headache, vomiting and diarrhea; these patients usually show active syphilitic lesion. After the second injection, the after effects are less common; after the third, somewhat more common. Cutaneous reactions, such as early or late erythemata are common. Injection into the subcutaneous tissues is to be carefully avoided since infiltrations will form which are, however, not dangerous if properly treated. No severe after effects have ever been observed as a result of the intravenous injection of concentrated solutions.—Muench. Med. Woch.

The Diagnosis of Pregnancy by the Biological Method of Abderhalden.

This question is exciting great interest amongst medical jurists and others, and articles upon the subject will be found in the Munch. med. Wochenschr., 1913, No. 17, by Heiman; ibid., No. 90, by Stange; ibid., No. 22, by Schiff; while in the Bulletin de l'academie Royal de Medicine de Belgique, tome xxvii., No. 8, Corin and Welsch give an admirable account of the methods of procedure and discussion of the medico-legal aspects of the subject. Their investigations give the following amongst other results: The reaction of Abderhalden applied in the diagnosis of blood stains due to a delivery or an abortion proved positive in 100 per cent. of the cases examined. The reaction gave positive results during the whole duration of lochial discharge. The age of a blood stain does not appear to influence the intensity of the reaction. The reaction cannot be obtained by using the product of maceration of a stain in the manner recommended by Nippe. The alexine is destroyed by a temperature of 60° C. and also by desiccation, and the reaction can only take place when the Schutz ferment and alexine are present. Bacterial infection of the products of maceration can be prevented by a 1 per cent. solution of sodium fluoride, and they must also be carefully filtered and dialysed.

The authors state that if the methods they recommend are carefully carried out, it is possible to determine whether a blood stain is due to delivery or to a clandestine abortion, as well as the further question, hitherto insoluble, of distinguishing maternal from fœtal blood.—Edinburgh Medical Journal.

The Type of Bacillus in Tuberculosis of the Bones and Joints.

The view that tuberculosis of the bones and joints is almost exclusively due to the human type of tubercle bacillus is emphasized in the Deutsche medizinische Wochenschrift for September 18th by Dr. B. Mollers, Koch's late assistant. His investigations in 12 cases of tuberculosis involving the bones and joints failed to demonstrate any but the human type of tubercle bacillus. Of the patients examined, three were between the ages of five and sixteen, the rest being older. Pure cultures of the bacilli were obtained in every case; in one case three cultures were obtained at different periods, and in another case two cultures. From the 15 cultures thus obtained 49 rabbits were inoculated with a dose of 10 mgm. each. These subcutaneous inoculations, which were to a certain extent supervised by Koch, conclusively proved, according to Dr. Mollers, that only the human type of tubercle bacillus was present. He has also collected the observations on this subject made by 15 workers in 163 cases (includ-

ing the 12 cases already referred to) of tuberculosis of the bones and joints. Of these, only four were associated with the bovine type of bacillus. The remainder were undoubtedly due to the human type. In other words, only 2.45 per cent. of these cases showed the bovine type of bacillus.—The Lancet, London.

Action of Epinephrin on Tetanus Toxin.

The author found that epinephrin exerted a powerful action on tetanus toxin in vitro. 1 Gm. of the alkaloid neutralizing several million lethal doses of the toxin. If, however, dried adrenal powder is used instead of epinephrin, all the tetanizing properties of the mixture are retained, even where the adrenal powder employed represents a notable quantity of epinephrin. Hepatic extracts, nervous tissue filtrates, and lecithin are similar to adrenal powder in their lack of antitoxic power. In fact, it is possible that lecithin, so abundantly distributed in the adrenal cells, or one of its derivative combinations, may actually favor the action of tetanus toxin. Conclusions: (1) The amount of tetanus toxin acting on the neurons must be extremely small, most of it being neutralized in the organism, perhaps by epinephrin, in the adrenals; (2) lecithin compounds are not unrelated to the action of tetanus toxin on the nerve-cell.—Marie Annales de l'Institut Pasteur.

Case of Friedreich's Disease Following Diphtheria.

Taylor reports the case of a man, aged, 21, who was admitted to the hospital December, 1917; discharged March, 1908; diagnosis, "postdiphtheritic ataxia." Readmitted October 31,1913. Had diphtheria in April, 1907, followed apparently by Postdiphtheritic paralysis—diplopia, regurgitation of fluids, weakness in legs, difficulty in walking. Now has ataxia. Knee-jerks not obtained. Plantars: Right doubtful, left entensor. Articulation peculiar; tremor; no nystagmus; slight scoliosis. No deformity of foot, although left foot different from right. Family history negative.—Proceedings of the Royal Society of Medicine.

Splenic Enlargement, Hemorrhage, Anemia, with Oral Sepsis.

Wynter reports the case of a man aged 50 who had severe epistaxis in May, 1913. He went to the hospital and the teeth were attended to after the bleeding had been stopped. On August 10 there was sudden pain below the left ribs; the spleen was found enlarged, and when the patient was admitted to the hospital on August 20 it extended to within 1½ inches of Poupart's ligament, and 2 inches beyond the umbilicus in the middle line. It was firm and not then tender. The heart and lungs were normal. On September 10 sudden and severe pain occurred over the spleen, with subnormal temperature, vomiting, and collapse. Friction could be heard over the organ, which was apparently the seat of an infarct. A similar attack occurred two days later, but less severe, and no friction could be detected. On September 18 severe and persistent epistaxis occurred, which was only arrested by plugging the nostril. On September 25 this recurred with less severity, both attacks being preceded by severe headache. No lesion of the mucous membrane could be detected. Apart from the leucocyte count the picture was that of splenic leukemia. The urine contained 0.3 per cent. of albumin, but was otherwise normal; specific gravity 1020; it was acid and clear; albumoses were not found. The teeth were much decayed, have been entirely neglected, and there was extensive pyorrhea.—Proceedings of the Royal Society of Medicine.

The Intestine as a Pathway of Infection to the Tubercle Bacillus.—Findlay (British Journal of Children's Diseases) reports on a series of experiments, conducted on rabbits, both healthy, and with an induced intestinal catarrh, the infecting material being placed in a capsule, and directed into the animal's stomach, thus preventing "insufflation tuberculosis." The conclusions are: (1) Healthy rabbits can be infected by the ingestion of large amounts of bovine tubercle bacilli; (2) the bacilli can pass through the apparently intact intestinal mucous membrane, and reach the mesenteric glands within a period of six days, though this occurrence is rare; (3) when infection occurs the intestine is invariably the seat of lesions, and thus tuberculosis of any organ other than the intestine is always a secondary infection, when the bacilli have entered by the intestinal route; (4) catarrh of the intestine does not favor the passage of the tubercle bacilli through the intestinal wall, but allows of a more constant, and also of an earlier and more widespread infection of the bowel, and in this way facilitates dissemination; (5) healthy rabbits apparently cannot be infected by the ingestion of large amounts of the human tubercle bacillus; (6) rabbits recovered from intestinal catarrh developed tuberculosis after the ingestion of human tubercle bacilli; (7) with the human type of organism a local lesion, though always

present, may be slight in comparison with the diseased foci in the mesenteric glands; (8) it would seem that the best means of combating the spread of bovine infection in childhood, until tuberculosis of cattle is eradicated, is in the avoidance of everything likely to cause intestinal catarrh.

Infantilism.—Zundel (The London Practitioner) says that infantilism is defined as an "anomaly of development characterized by the persistence of the morphological characters of childhood in an individual who has reached or passed the age of puberty, there being a delay both in physical and psychical development." Account must be taken of three factors in each individual case, viz., skeletal-genital, with secondary sex characters and mental development. In every case all of these are impaired, but to a varying degree. Classification depending on the ætiology is as follows: (1) General diseases, (2) conditions of malnutrition, (3) diseases of glands, possessidg an internal secretion. (1) General Diseases: Tuberculosis in one or other parent may produce infantilism in the offspring, without any evident tuberculous disease in the child himself, though it is more common to find active disease present. Similarly syphilis may act as a cause without any obvious disease in the patient himself. Often, however, syphilis shows itself in the form of a diffuse pericellular cirrhosis, or, more rarely, gummata of the liver. (2) Conditions of Malnutrition are seen with—(a) Morbus cordis, especially congenital pulmonary stenosis, aortic hypoplasia and acquired mitral disease; (b) cirrhosis of the liver, especially with the juvenile hypertrophic biliary cirrhosis; (c) gastro-intestinal affections, viz., diarrhœa associated with pancreatic insufficiency, and cœliac disease; (d) renal disease; (e) absorption of poisons, such as lead, mercury, nicotine, and carbon bisulphide fumes. (3) Diseases of Glands with an internal secretion—(a) Thyroid as seen in the cretin; (b) pituitary, as seen in the fat patient with infantile genital organs and childish mental condition; (c) thymus; (d) pancreas; (e) suprarenal; (f) testis.

Tonsillectomy.

The writer describes a method which he has found most efficient in a series of 250 cases. The gas and ether sequence, or ether by the open method, is used in the introduction of anesthesia. The latter is then carried on by the administration of warm ether vapor passed into the mouth through a tube attached to the mouth gag. In this way the operation is performed without interruptions and the throat easily kept clear of blood.

In commencing the operation proper, the tonsil is seized with an ordinary tonsil forceps and drawn forward. An incision is made through the mucous membrane of the anterior pillar at its margin, to expose the capsule of the tonsil. A separation is then made between the anterior pillar and the capsule. It is carried upward over the upper pole of the tonsil and then downward between the posterior pillar and the tonsil. By the use of a blunt dissector the tonsil is entirely freed from the pillars and remains attached only by its base. A snare is then slipped over it and, following the line of least resistance, cuts through the connective tissue, uniting the capsule to the surrounding tissues. When the tonsil has been removed a gauze sponge is placed in the fossa, and pressure may be placed upon it while the other tonsil is being removed in a similar manner. Usually this pressure is sufficient to control hemorrhage. If not, the bleeding point is picked up with hemostatic forceps and crushed, or a ligature passed around it.

The operation is quickly performed, there is no danger of damaging the pillars, and the possibility of post-operative hemorrhage is reduced to a minimum, not one of the 250 cases presenting the slightest indication of post-operative hemorrhage. — Macfarlane, in the Canadian Practitioner and Review.

Psoriasis in a Very Young Infant.

Davis reports the case of an infant eight weeks old, in whom the eruption appeared at the age of one month. A very large proportion of its entire body surface is covered with a figured erythema with scarcely any induration, but with a scaly surface. Where the erythema is limited by healthy skin it shows a circinate outline, suggesting the coalescence of circular patches. The face is involved and so also is the scalp, which when the patient was first seen was covered with a thick adherent crust. Most of the surface of the body and limbs is covered, but the extensor aspect is more affected than the flexor, although the exact points of the elbows and knees are not especially attacked. On the buttocks the eruption is complicated by the presence of a certain amount of napkin erythema. The diagnosis in this case lies between psoriasis and syphilis, but the latter is excluded by the following considerations: (1) The baby is perfectly well although it has had no antisyphilitic treatment. (2) There are no other signs suggestive of syphilis. (3) It is the youngest of four children, the ages of the others being respectively 11, 7 and 4. All of them

are healthy, and the mother has had no miscarriages. (4) The Wassermann reaction, both in the mother and child, is negative. It is interesting to note that there is no history, as far as can be ascertained, of psoriasis in the family. In most other cases of psoriasis in early infancy there has been strong evidence of heredity.—Proceedings of the Royal Society of Medicine.

Thyroid Origin of Hemorrhagic Uterine Disease.

In excessive thyroid functioning the coagulability of the blood is much reduced, while in insufficient functioning the coagulation time is much shortened. These effects throw light on certain cases of hemorrhagic uterine disturbances, suggesting that they are abortive forms of myxedema. Among 20 pure cases of hemorrhagic uterine disturbance the author found in 13 of the patients pronounced signs of thyroid hypofunctioning, and in all but one the coagulation time was from four to eight minutes in contrast to the nine or ten minutes with normal blood. The viscosity was frequently below normal—in a number only half of the normal ffgure. The author supports the view that thyroid insufficiency is a prominent factor in tetany in pregnancy, and possibly also in eclampsia. It is possible that all these conditions are different stages of the same disturbance in thyroid functioning. In any event, the condition of the thyroid should be ascertained in all cases of eclampsia, and this is easily done by examination of the blood, abnormally rapid coagulation testifying to a lack of the normal thyroid secretion. One of his cases was peculiarly instructive: A young woman with hemorrhagic uterine disturbance had borne twins three years before and had had severe eclampsia at that time; at recent examination the coagulation time was reduced to five minutes, and with a relative neutrophile leucopenia of 45 per cent. there was a lymphocytosis of 48 per cent. (in contrast to the normal 20 or 25 per cent.). It is possible also, he remarks, that the thyroid may be involved in the tendency to habitual abortion. Cases have been reported in which women with goiter who had been married for several years without conceiving bore children after thyroid treatment. Cretin mothers are liable to habitual abortion for a time, but finally bear living children. The habitual abortions of women with infantile uterus suggest that the thyroid may here likewise be in an infantile condition. It seems to be established now beyond question that syphilis is not responsible for all cases of habitual abortion — E. Sehrt, in the Munchener medizinische Wochenschrift.

Iodine in the Diet and its Role in Thyroid Disorders.

The iodine content of the thyroid gland can be modified through the diet as well as by medical administration of this element, for iodine is more widely distributed in food and beverages than is generally realized. The air also contains iodine,—especially in the vicinity of the ocean, though river water also contains it, that of the Seine, e.g., containing 5 mg. (1-12 grain) in every 10,000 kilos. (10 tons) of water. Many plants contain a noteworthy proportion of iodine, while, on the contrary, some do not contain any at all. The following articles may be considered iodine-free: Almonds, artichokes, bananas, young carrots, cocoa beans, chestnuts, Brussels sprouts, coffee beans, hazelnuts, endive salad, beans, lentils, peas, figs, strawberries, raspberries, melons, oranges, plums, pears, apples, grapes, wheat, rye, oats, barley, black radishes, and tomatoes. The following contain a great deal of iodine: Pineapples, beets, mushrooms, rice, garlic, and dandelion leaves. French wines, with the exception of champagne, all contain iodine.

Among the foods of animal origin, those obtained from the sea, especially shrimps, lobsters, and mussels, naturally contain the largest proportion of iodine. The meat of herbivorous animals contains a relatively large quantity of it, though calf, horse meat, and beef contain but little. Pork possesses a high iodine content. The flesh of game, including both mammals and birds, also contains a notable amount of iodine. Eggs can in general be put down as iodine free, while milk belongs to the group of foods with an intermediate iodine content.

From data such as the preceding the physician will be able readily to decide what articles of diet and beverages he may order in exophthalmic goiter, simple goiter, myxema, and obesity.—A von Bokay, in the Zeitschrift fur Balneologie.

The Treatment of Peritonsillar Abscess by the Local Injection of Serum (Antistreptococcal).

Henke describes his experience in the treatment of peritonsillar inflammation threatening pus formation, by the local injection of an antistreptococcal serum (Arch. f. Laryngol.). A careful bacteriological examination of eighty-six cases of peritonsillar abscess demonstrated to him the frequency of the streptococcus as the causative factor in these cases. It did not always occur in pure culture, but was sometimes associated with staphylococci.

Thirty-five cases were treated in this way. The antistreptococcal serum was prepared for him in small capsules containing 5 cm. By careful inspection of the throat, and with the aid of a probe, he satisfied himself as to the maximum point of the inflammation. The syringe was then inserted to a depth of 1½ to 2 cm., because mere surface injections proved of little or no value. At first, every case of this kind which presented itself was treated in this way, but a series of observations soon showed that in those in which pus had probably formed the serum produced no beneffcial result. He obtained the impression, however, that the injection caused a more rapid spontaneous rupture of the abscess.

In twenty cases the injection cut short the inflammation. On the day following the use of the serum in these cases the swelling in the neighborhood of the tonsil was distinctly less, and on the second and third days it had almost completely disappeared. An abscess never formed in any of them. A few minutes after the injection the pain, which is such a prominent symptom in these cases, and interfering with nourishment, entirely disappeared, and the patients could swallow without much discomfort other than that associated with the feeling of swelling in the throat. So marked was the relief of pain in some instances that the question naturally arose as to whether the injected fluid acted as a form of infiltration anæsthesia. In order to obtain information on this point, normal horse serum and physiological salt solution were employed in the same quantity in some cases, but the effect was not the same.

The above satisfactory results were not obtained, however, in all the cases of early peritonsillitis in which the serum was used. In some instances, sooner or later pus formed, and surgical interference became necessary. In spite of failure, however, the writer is convinced that in antistreptococcic serum, employed locally, we have a valuable therapeutic agent in a number of cases. —Edinburgh Medical Journal.

Medicine and the Law.

Sampson Handley mentions among distinguished lawyers recruited from the ranks of medicine the Right Hon. Sir Robert Finlay, Member of Parliament for Edinburgh and St. Andrews Universities, and a former Lord Rector of his own University of Edinburgh. The son of an Edinburgh physician, he graduated in medicine at Edinburgh, and was then called to the Bar. His brilliant subsequent career as Solicitor and Attorney General proves, at any rate, that a medical education offers no insuperable obstacle to subsequent legal success.— The London Lancet.

First Aid in Aviation.

At the recent International Congress on First Aid and Ambulance Work, held in Vienna, the subject of aeronautics and aviation received considerable attention. Hinterstoisser, of the Army Aeronauts, stated that first of all smoking near an airship or aeroplane was distinctly criminal. Nobody should rush to the place where any air craft was preparing to descend. Medical attendonce should be obtainable within an easy distance of an aerodome, and a portable first-aid outfit snould be ready at hand, as well as fire extinguishing apparatus. Persons with an unstable circulatory or respiratory system should not meddle with aeronautics, and perfect hearing was also necessary for a would be airman.—The London Lancet.

A Streptothrix in Cases of Banti's Disease.—Gibson (Proceedings Royal Society of Medicine) has discovered, by Wheal and Chorm's special method, a network of the mycelial threads of a streptothrix in the spleens from several cases of splenomegaly. These parasitic structures were generally associated with the walls of the veins and their immediate neighborhood, and this may account for the frequency of infarcts. The negative results of cultures from cases examined by many observers is not to be wondered at when the shyness of growth of many streptothrixes is borne in mind.

Treatment of Dysmenorrhea.—Bandler (Archives of Diagnosis) points out that to assure a dysmenorrheic patient that the cervix, because of its length, rigidity, or stenosis, is the primary factor in the trouble is to tread on uncertain ground. To perform a surgical dilatation of the cervix and make it more or less permanent by the use of an intracervical stem or by a cutting operation, without first knowing that the cervix is the main offender, often leads to a disappointment. If one is able, on the other hand, painlessly and without danger of infection or tissue injury, to dilate the cervical canal two or three days before menstruation, or even when the pains have begun, and the patient is thereby relieved of the dysmenorrhea, any surgical procedure then thought necessary can be done with considerable certainty as to the result.

To dilate the cervix painlessly and safely, he finds most advisable the use of the galvanic current. The writer employs aluminum sounds of various diameters, always smaller than the size which might be used if a little force were applied. A large plate

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is applied to the abdomen or under the sacral region, the negative pole being in the uterus, and a current of from five to ten milliamperes is passed for five to fifteen minutes. The intracervical negative pole causes a relaxation of the muscular fibres, the sound thereupon slipping out. At the same sitting or the next, a somewhat larger electrode may be substituted, and this may be repeated as judgment dictates, the electrode being always drawn out as soon as the patient experiences pain or discomfort. The intracervical pole causes, especially if a white or yellow secretion is present, an oxidation of the secretions with resulting production of bubbles. If the electrode fits too closely in the cervix and there is no egress for this frothy product, an increase of pressure occurs in the uterine cavity and cervix, pain resulting. If one, two, or three treatments on successive days before menstruation lead to a painless menstrual flow, fairly satisfactory proof is afforded that the cervix plays an important in the production of pain in the individual case. In many cases the author has, by the procedure described above, given relief from uterine colic.

The Occurrence of Tubercle Bacilli in the Circulating Blood.—Klopstock and Seligmann (Zeitschr. f. Hygiene) review all the literature on this subject, from Weichselbaum's paper in 1884 to those appearing in 1913, and then give the results of their own investigations.

The review gives anything but conclusive results. In some hands microscopic investigations have had a completely negative result, whereas in others the positive results have been numerous or even invariable. The same is true of animal inoculations, a large number of workers reporting either wholly negative or only exceptionally positive results. Others, on the contrary, report 50 per cent. or even a still greater proportion of successful inoculations. Some of these positive results, however, have been obtained in the case of blood from healthy subjects, as well as in patients suffering from diseases the relation of which to tuberculosis is usually regarded as very distant, or even hypothetical. They investigated the blood of 49 cases of pulmonary phthisis in all stages of the cisease. In nine of these appearances resembling tubercle bacilli were found microscopically, but only three of these could satisfy all the criteria.

Further, the blood in every case was inoculated into animals, and in not a single instance was a positive result obtained. The doctors discuss all the possible pitfalls which may lead astray the unwary in both kinds of investigation, and conclude that proof is still lacking that tubercle bacilli are present in the circulating blood in phthisical patients with sufficient frequency to furnish indications of value either for diagnosis or for prognosis.

The Occurrence of Tubercle Bacilli in the Faeces.—Laird, Kite, and Stewart (Journal of Experimental Medicine) give the following conclusions: Acid-fast bacilli have not often been found in the fæces of healthy persons; they have frequently been found in the stools of tuberculous individuals, and when present they are usually to be regarded as true tubercle bacilli. According to some authorities, bacilli are found in the fæces only in cases in which tubercle bacilli have been present also in the sputum. Others report their presence in the fæces not only when they have not been found in the sputum, but even when there has been no sputum to examine. Others, again, hold that the examination of the fæces should be of greater value than the examination of the sputum. The authors, after prolonged investigations, conclude that nearly all patients with tubercle bacilli in their sputum have also virulent tubercle bacilli in their fæces, as proved by animal inoculation; and further, that very few individuals whose sputum does not contain tubercle bacilli have acid-fast baccilli in their fæces.

The Chemistry of the Leucocytozoon Syphilidis and of the Host's Protecting Cells.—McDonagh and Wallis (Biochemical Journal) discuss at considerable length the biochemistry of the bodies which they have met with in the cells of the host in cases of syphilis, and which they consider to be a phase in the life history of the causative organism. Important deductions, all supporting the view that the bodies seen are really parasitic and not degeneration products, have been drawn from the appearances presented in the affected cells, and in other cells, by staining with various dyes, the staining or otherwise by the various dyes employed being indicative of the chemical constitution of the cell or part of a cell affected. They have found aqueous solutions of borax-methylene blue and of brilliant blue to be the best dyes for in vivo staining of the parasites.

Acid Saturation in the Treatment of Febrile Disorders.—Pallais (American Journal of Tropical Diseases and Preventive Medicine) finds that large doses of citric or tartaric acid are of great value in the treatment of various infections. Among the conditions referred to is malaria, in all forms of which these organic acids proved useful. In some cases that had resisted quinine, in fact, the acids were found valuable substitutes for it. A combination of

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the two measures is advantageous, the quinine being administered hypodermically and the acid by mouth.

In the atypical cases of typhoid fever frequently seen in the tropics, sometimes resembling malaria of a continuous type, the results of the organic acid treatment proved so striking and prompt that Pallais uses it to the exclusion of all other measures. It not only ouercomes serious cases, but also mitigates the course of the disease where given early, the tongue rapidly clearing, the tympanites, abdominal pain, constipation, and fetor of the stools passing off, the fever receding, and the albuminuria disappearing in a few days.

In blackwater fever the hematuria or hemoglobinuria is regularly arrested in a short time by the same treatment. In yellow fever massive doses of citric acid were found to cause a surprisingly rapid and marked improvement in the symptoms, hemorrhage, epigastric pain, jaundice, albuminuria, etc., quickly disappearing. Patients considered moribund or hopeless made a good recovery under the treatment, whereas, when used from the beginning of the attack, the acid was found to mitigate all the manifestations in a notable degree.

Finally, in cases of puerperal fever, equally good results were obtained. The author considers that the organic acids act by diminishing the alkalinity of the blood, thereby rendering the latter a less favorable medium for the growth of the invading organisms.

The dose of the acids administered by the author is from 300 to 450 grains (20 to 30 grams) in the twenty-four hours, given in ten ounces (300 grams) of water. In severe cases he gives as much as 600 grains. For children of ten years, half doses are given; for those of five years, quarter doses; nurslings stand 30 to 75 grains very well. When giving citric acid in combination with quinine, Pallais uses the following formula:

℞ Quinine sulphatis,.....grs. xv (1 gm);
Acidi citrici,.....ʒ iii-iv (12-15 gms);
Aquæ,.....ʒ iv (120 gms).
M. Sig.: Two tablespoonfuls every two hours.

The citric acid treatment, using massive doses, proved entirely harmless, the only untoward effect being a mild degree of laryngitis, which disappeared as soon as the treatment was stopped.

Effect of the X-Rays on the Ovaries.—Lavant (Arch. mens. d'obst. et de gyn.) gives the results of his use of the x-rays in sterilization of rabbits. In a first period the ovarian follicles disappear; degeneration begins a few hours after application of the rays, and is finished at the end of two weeks; nevertheless it is rare to see an ovary entirely sterilized so that the animal cannot be impregnated later. There are always some small follicles which remain intact and later mature. From the second to the fourth months is a second period; the interstitial substance regresses, the epithelium becomes flattened, like endothelium. After the fifth month a phase of repair begins; a new interstitial gland forms from the connective tissue cells of the stroma. Then the primary follicles which have been spared grow, and finally mature, but in smaller numbers, so that the genital life of the animal is limited. In some cases these follicles never grow and the animal does not become pregnant. It is the mature follicles that are most affected by the rays and it is the degree of development of the follicle that determines its susceptibility to them. The corpora lutea irradiated forty-eight hours after coitus are not affected. If rays are applied immediately after connection atresia goes from the eighth day. From the hemorrhagic cysts formed by irradiation of a follicle a corpus luteum forms presenting glandular cells reduced in number and volume, and deformed. The interstitial portion of the ovary is not directly sensible to the action of the rays. When sterilization occurs, or in the months of ovarian degeneration no rut occurs; but it returne when regeneration begins. Applying thess

results to woman we see that a definite sterilization cannot be expected by the action of the rays. Arrest of menstruation and regression of fibroids can be obtained. This is explained by a modification of the cells of the tamor, rather than by atrophy of the genital system, or ovaries. For the same reason the action of the rays on pregnancy should be slight, and depend upon the direct action on the uterus itself.

Treatment of Tuboovarian Varicocele by Intraligamentous Venous Ligation.—Sencert (Arch. mens. d'obst. et de gyn.) considers the treatment of true tuboovarian varicocele by intraligamentous ligation of the veins involved. He limits his subject to the variety in which the condition is not secondary to other pelvic troubles, but may coincide with varicose veins of the legs. He mentions a number of cases of this condition, some of them observed by him to show the existence of apparently idiopathic cases. This condition is often alone responsible for a train of pelvic symptoms including pain, dysmenorrhea, and similar symptoms, and relieved entirely by resection of the varices in the broad ligament. Seven such cases have been operated on by the author with six successes, the one failure being in a patient whose operation showed a large sclerotic uterus. The pathogenesis of this condition does not differ from that of varices in other situations. Mechanical, constitutional, and infectious factors unite to bring about mesophlebitis and ectasia of the veins of the broad ligament. One mechanical cause may be pressure of clothing over the abdomen; another the elongation and increase in volume of the uteroovarian veins in the course of frequent pregnancies occurring at short intervals. The diagnosis is very difficult, since the symptoms are the same as those of many other pelvic conditions. The chief diagnostic sign is the presence in the posterior cul-de-sac of a tender mass that is neither a prolapsed tube nor ovary and which can be seized between the external and internal hands. Varices of the legs, vulva, or abdomen tend to be coincident with the internal ones. Medical treatment of the character usually given for pelvic conditions will have only temporary effects on this condition. Operation may be by ligation or resection of the varix. Conservative surgical treatment applies to it the same measures as are used in scrotal varicocele, that is resection of the intraligamentous varices with shortening of the ligament. The operation begins with median laparotomy. Raising the broad ligament with forceps, at its upper border, between mesosalpinx and mesovarium, an incision is mode including the thin peritoneal layer transversely from one end of the ligament to the other. The masses of veins are isolated through this incision, tied together at the side of the uterus and cut away between two ligatures. The same ligation is carried out at the other end of the ligament. The end of the ligatures are then tied together so as to shorten the ligament. The peritoneal incision is sewed up and the wound closed with drainage. The existence of these varices may be a cause of secondary troubles, edema of the ovary, progressive interstitial sclerosis, changes in ovulation, and uterine sclerosis. The passive congestion caused by the varices produces pain and dysmenorrhea, which cannot be relieved by ordinary treatment, but which does not necessitate a mutilating operation.

Theory of Pathogenesis of Dermoid Cysts of the Ovary.—Termier (Rev. mens. de gyn. et d'obst.) mentions a new theory of the causation of dermoid cysts, rejecting the older one of included layers of the ovum as insufficient and not applieable to all the symptoms. The doctar mentions a case in which several dermoid cysts were found, occupying both sides of the adnexa, and states that inclusion of layers would hardly occur on both sides in the same individual. The theory is stated thus: the living being arises from a single cell, which becomes differentiated so as to produce all sorts of tissues: with regular development the result is a normal being: with irregular development it may be a monster or a complex tumor. The productive power of the cells gradually decreases. Each cell contains the germ of other tissues. One cell is capable of producing bone or cartilage, another nerve, and another epithelium, mucosa, or hair. Any abnormal excitation, a karyokinetic derangement, may cause formation of all the histological tissues of which normal deuelopment is capable. A special degeneration of the ovule, associated with consecutive proliferation of the Graffian follicle may occur. The best argument for this theory is the impossibility of accepting any other solution. We have learned that other influences aside from fecundation may cause development: saline solutions, dehydration of tissues, variations in osmotic pressure are such causes. Physical agents such as heat may also cause changes. There may be exciting or retarding influences on the cell. Teratological development may result in complex products and appearance of adult tissues, such as bone and cartilage. According to the stage of maturity, and the amount of male substance added to the ovum parthengenesis will conduct this ovule to an embryonic stage more or less advanced, but recognizable in spite of abnormal

and monstrous characteristics. Irradiation of spermatozoa affects the result of fecundation. In the human ovary some cells may be arrested and develop abnormally into dermoid cysts. The cause of arrest may be uterine, such as myoma uteri: change in circulation, edema of lymphatic origin, may cause through a hydrosis or osmotic variation the same results as parthenogenesis.

Reaction of Abderhalden in the Diagnosis of Pregnancy.—Sabin (Presse med.) says that the principle of the Abderhalden test depends on a humoral modification in the pregnant woman, consisting in the formation of proteolytic ferments. They are believed to be due to the appearance in the circulation of the pregnant woman of chorionic cells. The proteolytic ferment is found in the first growth of the placental tissue; it also occurs when the ovum is abnormally placed, and continues in all remnants of living placental tissue. The method of making the test is described and the extreme care that must be taken in washing and preparing the placental tissues for the test. Only the work of an experienced operator can be considered authoritative. He has tested seventy-two specimens of serum: in forty-three cases the reaction was positive, and in thirty-nine the result was confirmed by the presence of the signs of pregnancy. The women examined all had a retardation of menstruation of from eight to forty days. In the four doubtful results pregnancy had advanced to more than eight months. In sixteen cases the results were negative, and were confirmed by the absence of the signs and symptoms of pregnancy. Three of them were tuberculous, one syphilitic, one had a retroverted fibroma. In a woman pregnant four months with severe vomiting the reaction was negative. In abortion with placental remains in utero there was a positive reaction in three women, under eight days from rupture of the ovum; in four after fifteen days the test was negative. The author believes that when the test is more accurately applied and with greater experience it will be found of increasing value in the diagnosis of pregnancy.

The Rationale of Tuberculin Therapy.—Beraneck (Edinburgh Medical Journal) says the fact that tuberculosis is generally a chronic disease affords the *motif* for tuberculin therapy—a method of treatment which only slowly realizes its curative effect. All rational treatment of tuberculosis should aim at raising the activity of the protective cells and increasiug their diastasic antituberculous function. This means a course of training. The specific education of the diastasic antituberculous function of the protecting cells can be realized through the inoculation of attenuated or dead tubercle bacilli, and likewise by the inoculation of tubercle toxins. This is the *role* of tuberculin therapy. In order successfully to educate this function of the protective cells, the tubercle toxins of tuberculin should satisfy two condition: (1) From the physiological point of view they should be less virulent than the tubercle toxins circulating *in vivo*. (2) From the physico-chemical point of view the molecules of these toxins should be more easily destroyed by the protecting cells than are the molecules of the tubercle toxins liberated *in vivo* by the bacilli. Inoculated in suitable doses, tuberculin stimulates the antituberculous diastasic function of the patient. It improves the aptitude of the function to destroy the more virulent and more resistant tubercle toxins, which before the treatment circulated freely in the body. The author bases the preparation of his tuberculin on these factors. In order to avoid the risk of going beyond the optimum dose, which is often very minute, at the beginning of treatment, the following indications may be taken as a guide: (1) Begin by injecting 1-20 c.c. of a very dilute solution of his tuberculin (T.Bk.). (2) Repeat each dose of tuber-

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culin at least five times in afebrile cases in good general condition, and ten times or more in febrile cases in order to judge accurately of the stimulating effect of the dose on the defensive mechanism of the body. (3) Thereafter increase the preceding dose of tuberculin by 1-20 only. (4) When the optimum dose shows itself by a favorable therapeutic action, however slight, keep to that dose as long as its favorable action persists. (5) In the course of treatment, reactions should be avoided. These are in fact the evidence of an excess of tuberculin, and indicates that the optimum dose has been passed. The author concludes by saying that tuberculin therapy must not be regarded as a "reserve" procedure, only to be resorted to when other methods have failed.

Intravenous Administration of Camphor.

Camphor is being used more and more for infectious diseases, and the desire has been frequently expressed to find a convenient way of administering it in proper dose directly into the veins. Schule recommends a solution of 0.2 Gm. camphor in 0.5 Cc. sulphuric ether, which, he says, causes no discomfort beyond a slight burning and no changes in the blood. Rarely there is slight feeling of exaltation and a trifling cough. Care is necessary so that none of the solution enters the subcutaneous tissues.—Muench. med. Woch.

Ovarian Function in Basedow's Disease.

Report based on the ovary predisposes to the production of Basedow's disease. The physiologic climacteric may be considered to predispose to this affection. In 5 cases the menstruation before the manifestations of the affection, as well as in the first few months after its appearance, was regular. Entire cessation of the menses at the onset of the affection was noted in 10 cases. A connection between the severity of the cases and the cessation of the menses at the beginning of the disease cannot be established, but cases in which the menstrual flow has either ceased for a long time or in which the amenorrhea is interrupted by rare and scanty menstruations must invariably be classified among the grave ones. The treatment must be directed toward increase of the ovarian function. Frank, Gynakologische Rundschau.

Treatment of Diabetic Coma.

Three factors must be considered in treating diabetic coma, according to L. Blum: 1. The neutralization of acids in the tissues; 2, the excretion of acids; and 3, the stimulation of the circulatory organs. For the latter purpose, digitalis, caffeine, camphor and intravenous infusions with or without adrenalide are commonly employed, but these may all be ineffectual unless large of sodium bicarbonate are introduced into the system at the same time. The same may be said of other diuretics. They are indicated but often fail unless there is sufficient neutralization. In the precomatose stage, alkalies alone with a starvation diet or a diet of milk and flour will often prove effective. The best way to give alkalies is by mouth and 5 to 10 Gm. of sodium carbonate may be administered every half hour in carbonated water or wine until the urine is alkaline. Sensitive individuals may take sodium citrate or effervescent sodium citrate instead. Where there is a tendency to vomiting the salt may be given in capsules which dissolve in the intestiees; where diarrhea is present, equal amounts of calcium carbonate should be added The rectal administration is generally ineffectual. When an intravenoes infusion is decided upon, the concentration should not exceed 6 per cent., and a second infusion should not be given unless an active diuresis has occurred. Active purgation is indicated, particularly in the precomatose stage. The amount of sodium bicarbonate administered should always be reduced after an alkaline reaction has been obtained since the long continued use of large doses will invariably lead to gastric distress.—Berl. klin. Woch.

Keratin in Cirrhosis of the Liver.

Danilowsky was the first to use keratin in hepatic cirrhosis, and in 1905 made the first test in an advanced case of the cardiac type of the affection. Patient had been depending upon caffein and calomel and was becoming much worse. The keratin treatment was now continued for over a year, and the organ, at first enormously enlarged, became of normal size. Thus encouraged, the author tried the remedy on a case of Laennec's cirrhosis. The primary dosage was small—five half gram tablets daily—because of the accompanying gastroenteric congestion. Bismuth was used as a corrigent and the dose of keratin slowly increased. Caffein was also used steadily, along with the x-rays over the liver. After five months of this treatment, during which three paracenteses were necessary, no more ascites formed and all edema disappeared, with simultaneous diuresis. The size of the liver and spleen remained unchanged; in other words, the disease was arrested in its course, but no actual involution had occurred. In a second case the results were even more

striking. He improved more rapidly, and toward the last his treatment was ambulatory. The keratin was well tolerated by the intestine. As in the first case, the change wrought in the vessels of the liver had not become so marked as to affect the volume of the liver. In the third case there was not only an alcoholic, but a syphilitic history—nevertheless there was the usual degree of improvement: ascites, edema, enlarged abdominal veins all diminishsd greatly—in fact, became quite normal. There can, therefore, be no doubt that keratin is an antisclerotic remedy of much greater value than iodides. Of great weight is the fact that during the months of use no ill effects attributable to the drug were noted.—Berl. Klin. Woch.

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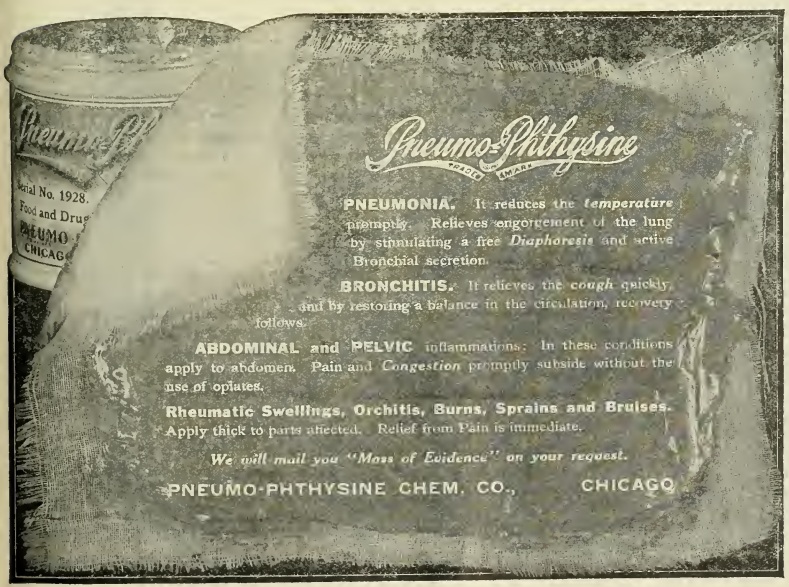
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Table of Contents for May, 1914.

Original Communications.

Malignant Intra-Ocular Tumors, by C. R. Dufour, M.D., Washington, D. C., 289
Our Tuberculosis Knowledge, by Mary E. Lapham, M.D., Highlands, N. C., 293
The Application of the Tuberculin Test to a City's Milk Supply, by Mosby G. Perrow. Ph.D., Lynchburg, Va., ... 296
Operative and Non-Operative Acute Mastoiditis, by Archibald C. Lewis, M.D., Memphis, Tenn., ... 298
The More Rational Methods of Treating Aural Diseases, by Dunbar Roy, M.D., Atlanta, Ga., ... 300
Inguinal Hernia, by W. B. Russell, M.D., Jackson, Tenn 303
The Mother and the Child, From a Public Health Point of View, by C. W. Stiles, Wilmington, N. C., 304
Report of Interesting Cases, by Dr. John Hill Tucker, Charlotte, N. C., ... 307

Editorial.

U. S. Public Health Service Pellagra Hospital Located at Spartanburg, S. C., ... 309
A Legal National Licensing Board, ... 309
Thyroid Eliminated from our Army and Navy, ... 309
Delusions, ... 310

Book Notices.

The Full of the Moon, by Caroline Lockhart, ... 311
Diseases of the Heart, by James MacKenzie, M.D., 311
Specific Diagnosis and Specific Medication, by John William Fyte, M.D., ... 312
Practical Sanitation. by Fletcher Gardner, M.D., 312
Radium Therapeutics, by N. S. Finzi, M.B., ... 312
A History of Laryngology and Rhinology, by Jonathan Wright, M.D., ... 313
Prevention and Control of Disease, by Francis Ramaley, Ph.D., ... 313
The Hypodermic Syringe, by George L. Servoss, M.D., 313
The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago, ... 313
My Wife's Hidden Life... 314
The Fundamental Basis of Nutrition, by Graham Lusk, ... 314
"Stammering and Cognate Defects of Speech," by C. S. Bluemel, ... 314

Abstracts.

The Treatment of Corns and Warts by Ionization, ... 316
Operations for Harelip in the Out-Patient Department, ... 316
Arteriovenous Anastomosis for Impending Gangrene, 317
Pituitary Extract in Obstetrical Practice, ... 318
The Isolation of Cocci from the Urine, ... 318
Ante-Mortem Thrombosis in the Right Heart and Pulmonary Arteries as a Cause of Death in Lobar Pneumonia, ... 318
Treatment of Diabetes Mellitus, ... 319
Improved Method of Operation in Dupuytren's Contraction of the Fingers, .. 320
Tetany, ... 320
Operation in Cases of Aneurysm and Injuries of Blood Vessels. 320
Diseases Due to Deficiency in Diet, ... 321
Innervation of the Eye Muscles, ... 321
A Case of Coffee Poisoning, 322
Emetine and the Specific Serum in Dysentery, ... 322
Treatment of Syphilis with a New Arsenical Preparation Galyl (1116), ... 323
Recurrent Intussusception: The Report of a Case which was Operated Upon Three Times, ... 323
Diagnosis and Treatment of Gun Shot Wounds of the Spleen, ... 324
Surgical Treatment of Ascites. 325
The Modern Treatment of Heart Disease in Children, 325
Local Treatment of Vincent's Angina with Salvarsan, ... 326
Infection by B. Coli in the Puerperium, ... 326
Acute Epidemic Poliomyelitis, ... 327
Treatment of Gastric Ulcer, 327
Treatment of Supplementary and Vicarious Menstruation, ... 327
An Inagglutinable Strain of B. Typhosus, ... 328
Uterine Hemorrhage, ... 328

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The Surgical Treatment of Tuberculous Pleuritic Exudates.—Spengler and Sauerbruch (Muench. med. Wochenschr.) say that it has long been noted that the occurrence of a pleuritic exudate is followed by a marked improvement in the underlying tuberculous process. This is only in part due to the mechanical compression of the diseased lung; in part, the absorption of certain elements of the pleuritic fluid appears to lead to the increased production of immune bodies. The treatment of such exudates depends primarily upon the condition of the lug. If the pulmonary tuberculosis is incipient and localized in one apex or one hilus, and if the amount of fluid is not excessive, it is best to leave the exudate alone. In all cases of advanced tuberculosis, however, especially those in themselves suitable for artificial pneumothorax, the fluid should be partially evacuated and replaced by injected nitrogen gas.

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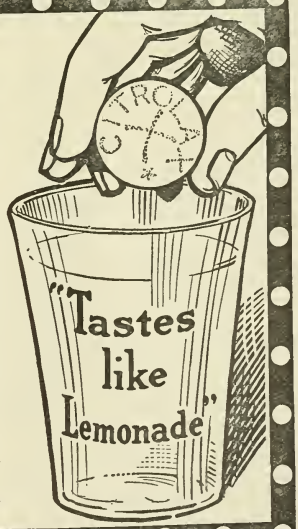

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It is the antibodies which constitute the part of immune serum used in the preparation of the Serobacterins. After procuring a proper serum the next procedure is to combine the antibodies it contains with killed typhoid bacilli. To accomplish this, the bacilli are mixed with a suitable quantity of the serum and the mixture allowed to stand at laboratory temperature, with frequent shaking, for 24 hours. During this time the antibodies attach themselves to the typhoid bacilli permanently. The bacteria together with the attached antibodies, are then removed from the serum by centrifugation. (The centrifuge is an apparatus in which tubes containing substances to be separated are whirled around with great speed, the heavier substances settling to the bottom of the tube. The typhoid bacilli being heavier than the serum, are thrown to the bottom and the serum is then drawn off). To remove every trace of serum, salt solution is added and the centrifuging repeated several times. This is called "washing." We now have a mass of typhoid bacilli combined with the antibodies which

*Antityphoid Serum is not marketed, as it has not been possible to secure a serum sufficiently rich in antibodies to be of much curative value; it is, however, potent enough to produce a good Serobacterin.

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they have extracted from the serum. These bacilli are said to be "sensitized" because when injected into the body they are more rapidly acted upon by the tissues, and immunity is quickly established (24 to 48 hours). When the bacteria are not sensitized before injection the body must produce the necessary antibodies. This takes from 5 to 10 days. Serobacterins are made up into suspensions (that is, the bacteria are mixed with salt solution, in the regular way, just as ordinary bacterins), and are standardized by estimating the number of bacteria per c.c. They are then placed in syringes ready for administration. Careful complement fixation and animal tests are employed to insure that proper sensitization has taken place. Since the value of Serobacterins depends on thorough sensitization, and the complement fixation test proves the extent to which sensitization has taken place, this test is a vital part of the technique.

EXCEPTIONAL SKILL AND FACILITIES NECESSARY.

Serobacterins represent a product which can be successfully prepared only in a laboratory especially equipped for the purpose. The procedure is complicated and cannot be carried out except by the highest type of laboratory experts. The difficulties surrounding the preparation of sensitized vaccines have up to the present time prohibited their production for general use. The H. K. Mulford Company, as in the past with other important developments in bacterin and serum therapy, is the first to overcome these difficulties, and to offer for the first time this superior preparation to the general practitioner. It is important at this time to caution physicians who wish to use sensitized bacterial vaccines in their practice to specify Serobacterins Mulford, as by doing so they will be certain of securing a reliable sensitized bacterial vaccine.

THEORY OF THE ACTION OF SEROBACTERINS.

Just why this combination of bacteria and antibodies constitutes the ideal bacterin has so far not been satisfactorily explained. Logically it would appear that the antibodies would neutralize the bacteria and the mixture would be inert. That the reverse is true, however, has been convincingly demonstrated by prominent authorities (see below).

WHO ORIGINATED SEROBACTERINS.

Credit for originating Serobacterins, or sensitized bacterial vaccines, belongs to A. Besredka, Professor of Bacteriology in the Pasteur Institute. His work has been verified by such prominent investigators as:

Dr. Elie Metchnikoff (Assistant Director of the Pasteur Institute), who together with Besredka, conducted experiments on chimpanzees with sensitized typhoid vaccine (living) and demonstrated that the animals thus treated could be fed large quantities of virulent typhoid bacilli without harm. Metchnikoff is famous for the discovery of phagocytosis, and its bearing on immunity, his work on intestinal putrefaction and the use of the Bulgarian Bacillus in its treatment, etc.

Dr. Theobald Smith, Professor of Comparative Pathology, Harvard Medical College, Director of Antitoxin and Vaccine Laboratory State Board of Health of Massachusetts, who showed that a mixture of diphtheria toxin and antitoxin, or, in other words, sensitized diphtheria toxin constitutes an effective vaccine for the prevention of diphtheria.

Dr. Charles Dopter, Physician-in-Chief, and Assistant Professor at the Hospital Val de Grace, who has achieved prominence for his own work on the serum treatment of cerebrospinal meningitis, dysentery, etc. His experiments with sensitized dysentery bacilli demonstrated that sensitization converts even this extremely toxic organism into a perfectly harmless vaccine, though up to the present time a dysentery vaccine of the ordinary variety (unsensitized) has not been used on account of the very toxic properties possessed by the dysentery bacillus even after it is killed.

Dr. A. Marie (of the Pasteur Institute) prominent for his work on rabies, tuberculosis and tetanus. He has been conducting extensive researches with sensitized rabies virus. The results of these experiments led to the adoption of sensitized rabies vaccine instead of the regular Pasteur treatment on account of the more prompt action and the small number of doses required.

Dr. A. Calmette, Director of the Pasteur Institute at Lillve, together with an associate, Dr. F. Meyer, have demonstrated the absence of toxicity in sensitized tuberculin. They had very encouraging results with the use of tuberculin thus prepared in treatment. As a result of their investigations, sensitized tuberculins are now being quite generally employed in Germany. Dr. Calmette is well known as the originator of the ophthalmic tuberculin test, etc.

M. H. Gordon, Assistant Pathologist at St. Bartholomew's Hospital, London, who made important clinical investigations with sensitized streptococcic vaccine or Streptoserobacterin in the treatment of erysipelas, etc.

The work of the above-mentioned scientists, as well as that of numerous other in-

vestigators (see Bull. No. 18) has verified beyond question the law laid down by Besredka that "whatever the nature of the virus, whether the microbe of plague, dysentery, cholera or typhoid fever, or whether the virus of rabies, or the toxin of diphtheria, whether the microbes are killed or living, sensitization confers upon them properties which convert them into vaccines of the first order, possessing an action sure, rapid, inoffensive and durable."

ADVANTAGES OF SEROBACTERINS.

1. Rapid Action.—The immunity secured by the use of Serobacterins appears so quickly that it is effective within 24 to 48 hours. The advantage of this prompt action is realized when it is considered that 5 to 10 days are required before the immunity following the first dose of the ordinary bacterin is present. (This of course applies to healthy persons when the bacterin is used for preventive purposes. In treatment the response following the injection of the ordinary bacterin is quicker than in immunization, but not as prompt as that following the use of Serobacterins. This will be explained in subsequent papers).

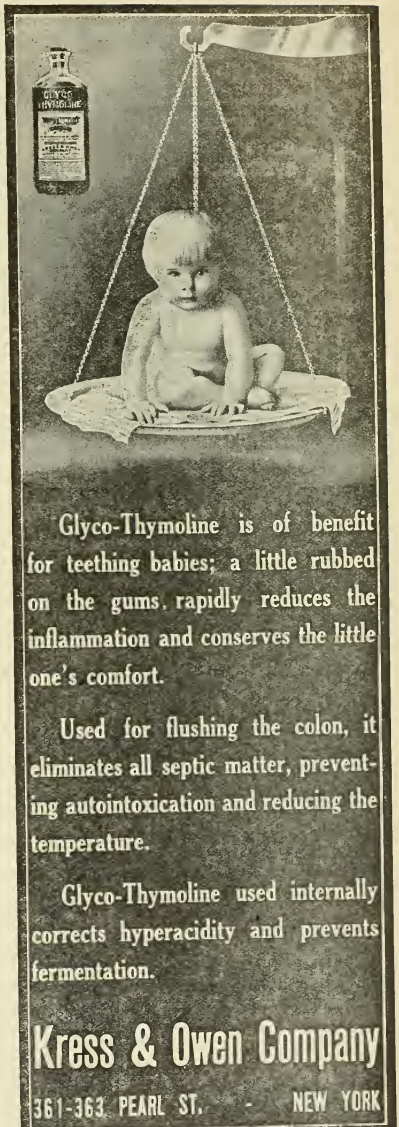
2. Elimination of Reactions.—No "local reaction" (soreness at the place of injection) or "general reaction" (headache, chilliness, and feeling of illness) follow the injection of Serobacterins. These "reactions" attend the administration of the ordinary bacterins, varying in degree with different patients.

3. Durability and Permanence.—Immunity secured by the use of Serobacterins is even more potent and lasting than that secured by the ordinary bacterin. This has been proven by animal experiments.

4. Harmlessness.—Serobacterins are absolutely harmless, and may be used in treatment at any stage of the disease. Following the injection of the ordinary bacterin there is a slight lowering in the content of bacteria-destroying properties of the blood due to absorption of these protective substances by the bacterin. This is known as the "negative phase." It is generally considered of no clinical importance, but is entirely eliminated by the use of Serobacterins, which, being already combined with antibodies, do not absorb any of these present in the blood of the patient.

HOW SEROBACTERINS ARE USED.

Serobacterins should be used by preference in every case where bacterin treatment of any kind is indicated. On account of their harmlessness they may be used even in the very latest stages of a disease. In such cases it was heretofore thought that only serums could be of any value. The


Glyco-Thymoline is of benefit for teething babies; a little rubbed on the gums, rapidly reduces the inflammation and conserves the little one's comfort.
Used for flushing the colon, it eliminates all septic matter, preventing autointoxication and reducing the temperature.
Glyco-Thymoline used internally corrects hyperacidity and prevents fermentation.
Kress & Owen Company
361-363 PEARL ST. - NEW YORK

FORMULA:

Benzo-Salicyl. Sod. 33-33: Eucalyptol .33; Thymol. 17: Salicylate Methyl. from Betula Lenta .16: Menthol .08 Pini Pumillionis-16: Glycerine and solvents q. s. 480.

reason for this belief was that the patient could not any longer produce antibodies, and that it would be necessary to introduce them from without, which could be accomplished only by administration of curative serum. With the Serobacterins, however, it has been shown that even in these cases good results frequently follow their administration. Serobacterins do not interfere with the administration of serum as a supplementary treatment in the usual manner.

ADMINISTRATION AND DOSAGE.

So far as the technique is concerned, Serobacterins are administered in precisely the same way as the ordinary bacterins. Their rapid action, however, enables one to give the doses much closer together, and their harmlessness makes it possible to rapidly increase the amount administered. For example, in the treatment of erysipelas, Gordon employed Strepto-serobacterins with excellent results in doses ranging from 100 million to 2000 million at daily intervals. Cruveilhier used similar dosage and intervals in a series of cases of gonococcic infection. (See Bulletin No. 18 in December Digest for abstract of Clinical Reports.)

HOW MULFORD SEROBACTERINS ARE SUPPLIED.

In packages of four syringes graduated as follows:

(All bacteria, except the staphylococcus)

Syringe A 250 million
Syringe B 500 million
Syringe C 1000 million
Syringe D 2000 million

With the staphylococcus (combined albus and aureus) the bacterial content is doubled.

Single syringes of D strength are supplied separately.

This arrangement is made so that physicians can administer the contents of Syringe A for the first dose and Syringes B, C, and D as subsequent doses at intervals of 24 to 48 hours, which will conform to the general usage for Serobacterins, as ascertained from a careful study of the literature that has appeared up to the present time. After reaching Syringe D, if it is necessary to continue the treatment, additional syringes of D strength may be secured separately. It is considered the proper procedure to repeat Syringe D rather than to further increase the dose. The treatment should of course be governed by clinical observation.

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application. the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

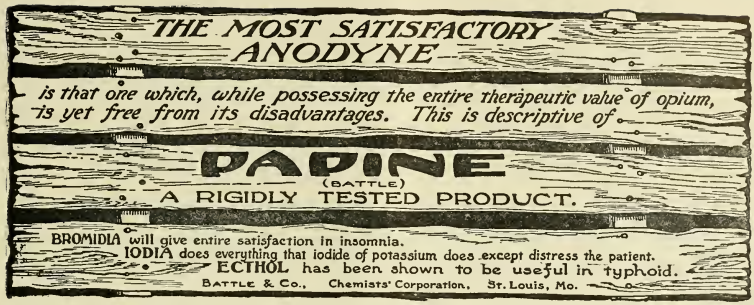
A Promising Agent in Gastro-Intestinal Disorders.

There is undoubtedly an intimate relationship between putrefactive changes in the alimentary canal, caused by the growth of harmful microbes, and disturbances of the general health, as of the digestive organs, the kidneys, the heart and blood-vessels, the brain and nervous system, etc. Intestinal antiseptics, it is believed, do not cleanse the digestive tract of objectionable bacteria and poisonous substances resulting from their growth, nor is purgative medicatisn effective. The bacillus bulgaricus, administered in the form of tablets, is said, on the other hand, to be notably efficacious in such conditions. It is asserted that these lactic-acid-producing bacilli, thus administered, survive for a long time in the intestine, multiplying and producing quantities of lactic acid, obstructing the growth of harmful micro-organisms and preventing disease.

Tablets of bacillus bulgaricus have given good results in the vomiting and diarrheas of infants, in diseases due to intestinal autointoxication, and in glycosuria and diabetes. They are prepared by Parke, Davis & Co., being supplied in vials of twenty-five tablets. The adult dose is one to three tablets, administered after meals for a period of three or four days, the treatment being repeated as clinical indications suggest.

Pepsin is undoubtedly one of the most valuable digestive agents of our Materia Medica, provided a good article is used. "Robinson's Lime Juice and Pepsin" (see page xiv this number) we can recommend as possessing merit of high order.

The fact that the manufacturers of this palatable preparation use the purest and best Pepsin, and that every lot made by them is carefully tested before offering for


THE MOST SATISFACTORY ANODYNE
is that one which, while possessing the entire therapeutic value of opium, is yet free from its disadvantages. This is descriptive of
PAPINE
(BATTLE)
A RIGIDLY TESTED PRODUCT.
BROMIDIA will give entire satisfaction in insomnia.
IODIA does everything that iodide of potassium does except distress the patient.
ECTHOL has been shown to be useful in typhoid.
BATTLE & Co., Chemists' Corporation, St. Louis, Mo.

sale, is a guarantee to the physician that he will certainly obtain the good results he expects from Pepsin.

Melubrin.

Melubrin is the sodium salt of a combination of amidomethane sulphonic acid with antipyrin, and possesses chemical properties which suggest better therapeutic results than those obtained from other antipyrin combinations or substitutes. Several authors record their favorable experience of this drug in rheumatism, sciatica, various infective processes, including tuberculosis, and in reducing the lightning pains of tabes dorsalis. Hahn further found that a distinct advantage over other salicylate preparations was that Melubrin could be given intravenously without any untoward symptoms being produced. K. Riedel (Muench. med. Woch., November 4, 1913) has given this substance by the mouth, and by various methods of injection, and has only once seen the slightest toxic symptoms; these, however, were of short duration. In one case of acute rheumatism, the pain and swelling disappeared after a single intravenous injection of 0.75 gram. But as a rule, much larger and repeated doses are required to attain this effect. He has made the observation that the therapeutic effect is just as good after subcutaneous or intramuscular injections, and now strongly recommends this method as being simpler and less tedious than the intravenous method. He gives from 2 to 3 grams twice or three times daily. He finds it useful also as an antipyretic and antineuralgic. In conclusion, he points out that powder and not tablets must be used for preparing solutions for injection, as the latter contains some starch.—British Medical Journal, Feb. 28, 1914, p. 36).

Adrenalin in Osteomalacia.

In a typical, recurring case of osteomalacia, H. v. Salis obtained remarkable results from the use of adrenaline, injected in doses of 0.5 C.c. daily, in two series of nine injections each. After the fifth injection the patient could turn around in bed and sit up and after the ninth injection she was again able to walk and there was much less tenderness over the bones. Slight after-effects, in the form of cardiac palpitation, headache and tremor were present. The patient was finally discharged as cured and subsequent examinations showed no return of the symptoms, despite the fact that she had been ill for 16 years. In other cases it may be necessary to give more adrenaline; thus, some authors have given as many as 150 injections of 0.5 to 1.0 C.c. As a rule, larger amounts are better tolerated in the acuter stages of the disease. According to the author the use of adrenaline seems to be the most effective treatment of osteomalacia at the present time and is to be preferred to the use of the Rontgen rays.—Munch. Med. Woch.

Treatment of Metrorrhagia.

P. Dalche writes that in metrorrhagia in virgins, repeated dippings of the hands in very hot, almost boiling, water generally proves effective as a remedial measure. Rest in bed, with or without heliotherapy or exposure to sunlight, is indispensable. An icebag should be kept on the lower abdomen. Calcium chloride and opium may with advantage be used internally. Vaginal injections should be given first at room temperature, then cold; they are not indispensable, except to wash out clots that are beginning to undergo putrefactive changes. Thyroid preparations in moderate doses give good results; mammary or adrenal organotherapy also sometimes proves serviceable. Blistering over the liver brings about arrest

of some refractory hemorrhagias. Fresh animal serum or antidiphtheritic serum may be applied by the rectum, or administered internally, in a little sweetened water, before the menstrual period. Radium and the x-rays control ovarian activity, but there is danger of overstepping the limits of safe dosing and causing permanent sterility.—N. Y. Med. Jour.

Radium and Roentgen Therapy in Gynaecology.

The most striking and interesting discussion at the Seventeenth International Congress of Medicine in the Section of Obstetrics and Gynæcology was that dealing with radium and Roentgen therapy in gynæcology. The extremely eulogistic terms in which some of the foreign speakers referred to the results obtained by these methods of treatment were listened to by a large and interested audience. The subject is one of the greatest possible interest and importance, and if the results claimed to be obtained turn out to be permanent and the method free from dangers it will produce little less than a revolution in, for instance, our methods of treating fibromyomata of the uterus and many cases of malignant disease. It must be remembered that some observers maintain that such unfavorable sequelæ as damage to the walls of the intestine and the formation of adhesions and even intestinal obstrucion have occurred, and obviously as one of the speakers remarked, we must wait and see before accepting the results as proved. The first reported was by Albers-Schonberg, who communicated his results in a paper amplified by carefully tabulated statistics. His report included 46 cases of myomata, 26 of carcinomata, 35 of fibrosis uteri, a short series of menstrual abnormalities, and some cases of pruritus vulvæ; all of these were treated by x-rays. Experiments had proved that the rays had a definite deleterious influence on the male and female genital glands. Their influence on myomata, however, was not solely due to ovarian atrophy, but included a direct action on the myomatous stroma. The great percentage of myomata did not disappear under treatment, but the percentage of complete relief from symptoms was a high one. Lasting cure was to be expected with certitude in favorable cases, but a certain number of myomata proved quite refractory, he did not consider that the indications for favorable cases were yet definite. He summed up the general indications for x-rays in gynæcology as follows: (1) Induction of menopause; (2) removal of post-climacteric bleeding; and (3) soothing of menstrual difficulties at all ages, if possible without sterilization He preferred to use as few rays as possible and to regulate by a varying exposure. Hæmorrhage might increase after the first or second dose, but later decreased.

The second reporter, Foveau de Courmelles, made it clear in his opening sentences that neither radium nor x-rays must be regarded as a panacea. He had treated fibroids for the past ten years with x-rays, and when applied discriminately was convinced of their great utility. Hemorrhage and pain were usually the first to go, but young fibromata, even when of large size, yielded rapidly. The action was much more rapid about the menopause; failure occasionally occurred even after a preliminary improvement. Contraindications were: (1) polypi and (2) degenerating tumors. Discussing radium, Dr. de Courmelles found it possible to give a very favorable report in malignant disease. Of 100 cases of inoperable carcinoma 70 per cent. had improved for from 1-4 years, the mobility of the uterus had increased, hemorrhage and leucorrhœa had diminished, and general improvement had rapidly appeared. He applied 1-5 cgr. of pure radium to the neck of the uterus for 6-24 hours. He hoped that bad as well as good results would be made public.—The London Lancet.

The Dose of Venom given in Nature by a Cobra at a Single Bite.—In the Indian Journal of Medical Research an article under the above heading is contributed by Acton and Knowls, giving details of experiments. The following are the conclusions:

1. The average total venom yielded by an adult fresh Echis of 13½ inches is equivalent to 18-8 mgms. of dried venom.

2 The amount given at a good bite is about 18 8 mgms.

3. From the above results it follows that an Echis give at its first bite about ten-fourteenths of the total venom in its glands; a fraction of which agrees fairly well with the ten-sixteenths abtained for the cobra.

4. There is every prospect that an Echis antivenene of even low protency will almost eliminate the mortality from Echis bite.

5. As it is, however, even without such an antivenene, the chances of recovery after being badly bitten by an Echis with full glands are about 40 per cent.; and if other factors are present which would occur in nature but which were absent from our experiments, the chances of recovery may be even higher.

The Charlotte Medical Journal

VOL. LXIX CHARLOTTE, N. C., JUNE, 1914. No. 6.

Treatment of Lateral Curvature of the Spine.

By James K. Young, M.D., Associate Professor of Orthopedic Surgery in the University of Pennsylvania; Professor of Orthopedic Surgery in the Philadelphia Polyclinic; Professor of Orthopedic Surgery in the Woman's Medical College, etc.

Great interest has of late been attracted to the subject of the treatment of scoliosis, since the introduction of the forcible method of Abbott. In considering the treatment of scoliosis, two principal forms may be considered: The functional or postural, and theo rganic or rotary. The rotary form may be distinguished by placing the patient in Adams's position, the patient standing and bending forward and the arms hanging loosely at the side. In this position the curvature will entirely disappear if it be of the functional type; but the deformity will persist and the prominent side will remain deformed if it be of the rotary type, the angles of the ribs being rotated upward on the side of the deformity and downward on the opposite side. In addition to this test the Roentgen rays are of great value in differentiating the functional from the rotary type. In the functional variety of the affection no changes are noted in the bony structure; in the rotary type there are to be observed pressure changes and bony deformity.

Treatment of the Functional Form.

The treatment of the functional form may be accomplished by the employment of light gymnastic exercises. The method which the writer described twenty years ago for the treatment of this form of scoliosis, has been somewhat modified during this interval, but in all essentials remains the same.

This consists of light exercises, taken in the horizontal position, lying on a table; in addition to these, special attention is paid to breathing exercises. The treatment otherwise does not differ from that formerly employed. This treatment may be described as consisting of four parts:

A. The strengthening of weak muscles, by the use of exercises, applied to the muscles either individually or collectively.

B. Slight over-development of the weak muscles.

C. The uniform development of all the muscles.

D. The employment of eight selected movements to prevent relapse.

To secure the over-development of the weak muscles, it is necessary to find the best voluntary position capable of being assumed by the patient, and then taking all the exercises in that position. These keynote or special positions place the muscles in the best possible relations for exercising; indeed, the employment of the spiral movements, such as, keynote, forward, sideways turning, etc., have a most beneficial influence, notwithstanding the contrary opinions set forth by some observers. Special attention should always be devoted to the development of the lower extremities for two reasons, namely, because they are frequently unequally developed and also because a firm basis of support is requisite upon which to balance the erect superstructure.

In the performance of all these movements, great care should be exercised and the patient should be under the watchful observation of the surgeon, even when a trained assistaut has the case in charge.

Daily treatments of from three to six months' duration are to be recommended. A certain variety of exercise may be permitted, occasionally it is better to change the exercises, returning frequently to those from which most benefit has been derived, or better, by employing those that appear the most useful, and with the addition of others from time to time.

Daily massage after the exercises is strongly recommended. It should consist of several different movements, with a threefold object in view, namely, to tone up the disabled muscles, to divert the blood from the spinal region and to rest the patient after the fatigue of exercising.

Contraindications to the employment of the exercises include the menstrual period, and their modification or discontinuance during the heated period of the year, depending rather upon the out-door life of the individual for the necessary exercise; again these patients should not be permitted to attend to their school duties, and all social calls and social engagements are interdicted.

Treatment of the Rotary Form.

The rotary or organic form was at one time considered incurable, but the results obtained by Abbott and others amply demonstrates that in selected cases, many of these may be greatly benefited and some cured. Great care should be used in the proper selection of cases for treatment by

the forcible method.

The patient is prepared for the operation of forcible correction by stretching the body in a special frame each day (the patient lying on a canvas hammock) for a period of two weeks. The operation itself should be considered a capital one, since it must be performed with the greatest care, and it must not be forgotten that there is danger of injury to the ribs, the nerves and the spinal cord. The patient is prepared for the operation by padding the bony prominences with heavy saddler's felt, specially cut and placed between two undervests. Sheet wadding may also be used to protect the body where the patient is very thin. The hammock is cut with one side longer than the other, so that the concave side of the body may sag down into the dependent portion. By means of canvas bands passed about the body one side of the pelvic girdle is rotated forward and one side of the shoulder girdle rotated backward, thus untwisting the spine. The prominent ribs are pressed backward by a pad, and while the patient is in this position, a thick, heavy plaster of Paris cast is applied; after this has hardened the patient is removed from the frame, and a large fenestra or opening is removed from the plaster cast over the concave side of the back, and openings are cut in front on the opposite side in which to place felt pads, and thus force the body over. When completed the patient stands with the low shoulder raised and the body bent forward. The patient wears this cast from three to six months, making changes from time to time, and subsequently a corrective celluloid jacket is worn. Gymnastic exercises are used for a long period, after the removal of the plaster cast. The patient should remain in the hospital during the first portion of the treatment. There is always a tendency to the return of the deformity, and it is, therefore, imperative that an overcorrection be secured. The results obtained by this form of treatment are superior to any that were formerly reported for the correction of the rotary or organic form. The treatment is long and tedious, and requires great skill and patience. Mass age is of value in connection with the exercises.

In conclusion it is worthy to note that in this method the rotation is corrected first, but that the lateral bending remains and that this is less difficult to correct. The correction should be made before the deformity has attained a stage where overcorrection is impossible. The after-treatment is always difficult and must be continued over a long period of time.

After considerable experience with this method, the writer feels much encouragement. The operation is a severe one but in selected cases the results obtained justify the procedure. By the Abbott method cases that were formerly regarded as incurable or impossible of betterment, not only can be greatly improved upon, but in many instances cured.

In the selection of cases for treatment by this method, there are certain diseases and conditions that contraindicate its employment. These include infantile spinal palsy with severe sharp ridge-like curves; all cases of old cured Pott's disease with lateral bending; all those deformities due to supernumerary bones.

In the sharp ridge-like curves met with in infantile palsy, there is great danger of severe sloughing, both on account of the sharp character of the deformity and the lack of nutrition in the integument, resulting from the primary disease.

In case of cured Pott's disease with ankylosis there is great danger of lighting up the old disease and producing cold abscesses, or if great care is not exercised, displacement of the vertebræ with pressure (cord) symptoms might result. In lateral curvature from supernumerary centresi in the spine it is obvious that the structural changes in the bones can't be overcome, but some improvement may be secured in the curves above and below.

In regard to the age at which these treatments may be given, it is a peculiar fact that patients of twenty-three or older stand the treatment and respond more quickly than those under fifteen years of age; undoubtedly due to the fact that they stand shock better. In paralytic cases there is great danger of producing sloughs, and also the danger of injury to the pneumogastric and the phrenic nerve, if too great a force is applied.

222 South Sixteenth Street.

Four Months' Experience With Dr. Von Ruck's Vaccine Against Tuberculosis*

By Roswell E. Flack, M.D., Spray, N. C.

I wish to present a brief report on some tuberculosis work which I have done under the auspices of the Department of Welfare and Health, at Spray, North Carolina. Since Nov. 27th of last year, 314 patients were treated by me with Dr. Karl [von Ruck's vaccine(1). In 157 of these cases a carefully kept record was made from week to week and their progress was indicated by gain in weight and improved nutrition; 103 gained in weight, the maximum gain being 22 pounds, the minimum gain ½ pound; the average gain was 6 pounds. The in-

*Read before the Rockingham County Medical Society, April 23, 1914.

crease in weight was usually experienced during the progress of treatment, but a few cases showed no gain in weight until one month after the completion of the treatment, when a gain of from 10 to 15 pounds was experienced. The 52 patients who showed no gain in weight, some of them were not tuberculous, as was shown by physical examination and the failure to respond to the vaccine either locally or generally; others showed only slight evidence of tuberculous disease and received only one or two doses for prophylactic purposes. Still others, who failed to record a gain in weight, declared that they felt better after the treatment, or that they had their normal weight when treatment was begun. To cite one instance, they said that they were practically free from colds, while before treatment they "kept a cold all the time;" they also felt less tired while at work.

The increase in weight during and after successful treatment for tuberculosis depends, to a great extent, upon the power of the body to respond to the immunization. In case of a prompt response to form antibodies, not only is prevented the extension of the tuberculous process, by the bactericidal action acquired by the organism, but also the endotoxins set free by the bactericidal action are neutralized, thus checking a serious drain on the nutrition, and the organism can the better assimilate the food stuff supplied to it for the building up of its organs.

At the Baptist Orphanage, Thomasville, N. C.,(2) a number of children, tuberculous, probably tuberculous, and normal were immunized in 1911 and 1912. After a period of fourteen months it was found that the tuberculous and probably tuberculous children had gained twice as much in per cent. of body weight as had the normal children, and that the increase in weight of the tuberculous children three months after treatment is nearly four times as great as that of the normal children, showing the remarkable change in general improvement soon after the administration of the vaccine. The comparative study of the weights of the children also shows that, when the tuberculous children have attained their normal weight that any subsequent gain is not greater than that shown in normal children.

The gain in weight would, therefore, be most in children and young people, other things being equal, in those who had most to make up before attaining their normal weight; after that any further gain would be along normal lines. In patients with less involvement and consequently less loss in nutrition and weight, the gain following upon the treatment would not be striking, because comparatively little body weight had to be made up.

It is impossible to give an account of the gain in weight of all the patients treated, because in our Welfare work we had no regular medical office and no scales until after Christmas; but after this date carefully kept records have been made of all cases from week to week.

I wish to add that in every case the increase in weight must be attributed solely to the vaccine, because no change was made in the hygienic and dietetic conditions under which the patients had been living before; most of them were working in the mill during the entire period of treatment and lived under the same conditions as their fellows did.

Out of the total of my cases I wish to give some details which are representative and demonstrative of what can be done with an effective method of immunization against the tubercle bacillus. These eight cases are not especially selected as the only striking ones that I have at my disposal, but to give a short account of all the patients who have shown remarkable improvement in their physical condition would be a needless repetition and would consume more time than I have at my disposal.

Case No. I.—Young man, aged 26. Came for examination November 29, 1913, complaining of cough and copious expectoration, weakness, and inability to work for the past year.

Examination showed retraction of both upper fronts; rales, medium and coarse, were heard at both apices in front; also rales at lower left base. Cavity below left scapula on left, extending into axillary region.

Weight, 144 pounds; temperature 99.1°F.; sputum positive; tuberculin reaction positive.

After the third dose of vaccine, cough and expectoration became less; patient began to gain in weight. At the completion of the treatment, 5 c.c. of vaccine having been used, he weighed 158 pounds; the cough had disappeared entirely and the patient expressed himself as feeling greatly improved.

On re-examination, January 30, 1914, a few fine rales were heard in the first and second interspaces on the right side, and over the lower left base. The lungs had cleared up greatly and showed that the process had become much lessened. The patient is now at work.

Case No. II.—Baby, 18 months old. Was seen in consultation December 2nd, suffering from a large, red, tender mass below the angle of the right jaw. The mass was hard and fluctuation could be obtained in a small area. The anterior and posterior cervical glands were enlarged on the left

side. Tuberculin reaction positive.

The first dose of vaccine, 0.05 c.c., was given December 2nd. On the 7th, the glands had greatly diminished in size, and the baby was not nearly so fretful. After the fourth and last dose, making up a total of 0.5 c.c. used, the anterior cervicals on the right were just barely palpable. Those on the left side could just be felt. The first two injections gave rise to a temperature of 100° and 101°. During the fifteen days of treatment the little patient was converted from an extremely irritable baby into a happy, smiling one.

Case No. III.—Baby, 6 months old. On examination December 6, 1913, the anterior and posterior cervical lymph glands were enlarged; also the left axillary glands, one being 2 c.m. in diameter. The left inguinal glands were enlarged; the lungs were negative; tuberculin reaction positive. On the chest, I must add that in the left 7th interspace there was an open abscess which had been lanced. The baby was in a poor state of nutrition, very fretful and slept poorly.

After the first treatment, the mother noticed that the baby was not so irritable and fretful, and that he slept better at night. After the second treatment the abscess was completely healed. After the fourth and last injection the baby had gained in weight and was no longer fretful.

On March 28, 1914, the mother brought the baby to see me, and I could hardly recognize my ill and miserable little patient of only three months ago.

Case No. IV.—Man, aged 38. Complained of nervousness, weakness, loss of appetite, loss of weight. On physical examination there were found enlarged cervicals; dulness in right second interspace. The breath sounds were harsh and rough at the right apex and in the first two interspaces on the right side. Broncho-vesicular breathing at the lower border of right scapula, also rales. The patient weighed 157 pounds. The tuberculin test gave a positive reaction.

The patient began to improve after the first dose of vaccine. After receiving 4.5 c.c. of the preparation he was re-examined, when the lungs were found to have entirely cleared up except for a little roughness at the right apex. He now weighed 172½ lbs., a gain of 15½ lbs., in two months.

Case No. V.—Young man, aged 22. Came for examination December 9, 1913, complaining of weakness, loss of appetite, and pain in the chest. On physical examination retraction of both upper fronts was noted; great retraction below the fifth rib on the left side. Broncho-vesicular breathing over left front; fine rales over left front to fourth interspace. Pleuritic friction rub in left axilla. Harsh and rough breathing over right upper front. The weight was 116 lbs. Tuberculin reaction positive.

After taking a total of 4.8 c.c. of the vaccine the patient had gained 17 pounds in the course of two months. Before treatment he had not been able to work more than half time in the mill; since commencing treatment he has not lost a day's work. Now, two months after the completion of the treatment, he still keeps his increased weight and is at work.

Case No. VI.—Boy, aged 16. Examined January 3, 1914. Retraction of both upper fronts was observed; enlarged cervicals; dulness over right upper to third interspace. Breath sounds harsh and rough over the right upper, and fine rales on coughing. Expiration prolonged. Slight roughness over left apex and first interspace. Temperature 99° F. Weight 119. Tuberculin test positive.

This patient gained nine pounds in two weeks, between the third and fifth dose. The total amount of vaccine given was 2.4 c.c.

Case No. VII.—Boy, aged 14. Complained of cough, expectoration, and pain over right side and right front; loss of appetite. The examination disclosed a flat chest; retraction of right upper; enlarged cervicals and axillary glands. Half-dull over right apex to third interspace. No rales. Harsh and rough breath sounds; blowing expiration. Temperature 100°. Weight 111 lbs.

During the last four weeks of treatment, the patient gained 2½ pounds each week, bringing his weight up to 124½ pounds, a gain of 13½ pounds. There was no temperature after the injection of a full dose of vaccine. Cough and expectoration have disappeared, and the patient feels well. Refused to come back for re examination.

Case No. VIII.—Boy, aged 18. The right upper was found to be retracted;there was dulness on right side, over retracted area. Breath sounds were harsh and rough at right apex and in first and second interspaces. Cervicals and axillary glands were enlarged. Weight 127 lbs.

After taking a total of 5 c.c. of vaccine the patient weighed 149 pounds, a gain of 22 pounds during the course of 2½ months. No re-examination was made. The boy worked during the progress of treatment.

You can readily understand from these few reports, although given very briefly, what my feelings are in regard to the method which I have employed. Nobody who has watched the steady improvement from week to week as I have done, and noted the steady and constant advance against the tuberculous condition, which, in many instances, had presented most distressing

features at the beginning, could do otherwise but rejoice in this method of treatment, which in a few weeks' time enables us to secure tangible results which overshadow those obtained by the ordinary methods in vogue in far longer periods of time. The clinical results which I have obtained are too manifest and indubitable to permit any doubt whatever as to the role the vaccine has played in regard to them.

There is one case in particular that I wish to discuss, which occurred in my practice sometime ago and which caused some anxiety and anticipation of injury. A young lady presented herself for treatment. On examination there were found enlarged cervicals and slight involvement of right apex. The first and second injections gave rise to slight tenderness in the arm. After the third dose, I am told, there followed a general reaction, the fever reaching 101-102° F. The reaction alarmed her physician to such an extent that he advised the patient to discontinue the treatment, lest she succumb to a tuberculous dissemination.

The fear of a tuberculous dissemination after a sufficient dose of a specific remedy to give rise to a decided fever reaction is an heritage of the first tuberculin era, when probably it did occur in a very few cases after, what we know now to be, excessively large doses. At that time the selection of cases for tuberculin was not very critical, to say the least. We fully understand why a decided fever reaction is feared, and neither the patient nor her medical adviser is to be censured for being alarmed. Dr. von Ruck informs me that he himself, at first, studiously avoided a decided fever and focal reactions with the Watery Extract, and that he used very small doses. In explaining, he further states that the better and quicker results which are obtained are due to the fact that far larger doses are now administered; and it seems that Koch was right, after all, when he considered reactions to be dssirable for the stimulation of the tuberculons focus.

I wish to impress firmly upon your minds that the Watery Extract and the New Vaccine differ very materially from Koch's tuberculin, and that a fever reaction following the latter can, if intense, give rise to a dissemination of tubercle bacilli by stirring up a tuberculous focus. While on the other hand, with the Watery Extract or with the Vaccine, given in properly selected cases, injury is exceedingly unlikely to happen, and no such case has been observed so far. According to the difference in the nature of the tuberculin and of the Watery Extract and of the Vaccine, the nature of the fever reaction differs. A fever reaction resulting from tuberculin is a respone to a focal stimulation; one from the Watery Extract or the Vaccine is due to the endotoxins of the tubercle bacilli liberated through the bacteriolytic power acquired by the blood serum in the course of immunization; from the tuberculin reaction a dissemination of tubercle bacilli may or may not occur; from the Watery Extract or Vaccine a fever reaction does not indicate a dissemination. The blood absorbs the tuberculous endotoxins and before these are neutralized by the immune bodies in the blood, a fever reaction is unavoidable, but fortunately is not harmful. The young lady in question, whose temperature so alarmed her physician, has paid the price for the immunity which she has developed against her tuberculosis, and she will make an uninterrupted recovery. She will, in fact, experience a gain in weight and improved general condition that was the pleasing fate of many others.

The New Vaccine against tuberculosis marks an important epoch in our struggle against infectious diseases, especially against tuberculosis, which dates back to 1798, when Jenner first vaccinated a boy against smallpox. Jenner's work was based upon clinical observation and was entirely empirical, but he gave investigators a means of providing the infected organism with the necessary weapons to fight its infection, and to provide the normal body with protective substances to protect it against a possible infection. Jenner's example, as you well know, was not applicable to other diseases until the work of Pasteur, of Koch, and of other investigators had supplied the necessary knowledge of the various pathogenic organisms; in short, until the modern science of bacteriology and immunology had been developed. It is by no means a forgotten story how the brilliant Pasteur worked his immunization against rabies, how v. Behring applied the same principle in his antidiphtheritic serum which has lowered the mortality of this dreaded disease from over 75% to less than 10%. In more recent years we practice immunity against typhoid fever, and Flexner has reduced the mortality in cerebro-spinal meningitis from 70% to 25%, and more recently in the epidemic in France to 15%. Also we treat now successfully various diseases affecting the domestic animals by like methods. The time is near at hand when it will be possible to prevent and certainly to cure the infectious diseases which still demand such an enormous toll of our children.

Returning to tuberculosis, prophylactic immunization against the tubercle bacillus, or to successfully immunize a non-tuberculous organism, has always been consid-

ered impossible, and is still believed to be so, because it is only recently that the problem has been solved. And yet it was practically solved in 1897, when Dr. Karl von Ruck had perfected his Watery Extract of Tubercle Bacilli. With this preparation he was able to show remarkable results in the treatment of tuberculosis that it would be difficult to find any better. The Watery Extract, it now appears in the light of more recent results, fulfilled all conditions of an efficient means to stimulate the tuberculous organism to the complete production of anti-bacterial substances in the blood, because it contains all the active constituents of the tubercle bacillus in solution. Its efficiency is fully demonstrated in a case of a little girl, aged two, who received a few doses of the Watery Extract, the total of which is less than is now given in a single dose. Although exposed to infection for years, because she was almost daily in the sanatorium, the little lady has never presented any sign of tuberculosis. Her blood serum has now complete bactericidal and bacteriolytic power, over ten years after immunization. She has grown into a young lady of twelve, a picture of health and splendid development.

The reason why tuberculin proved a failure as a curative remedy is that it does not contain the bacillary substances, but is made up of culture fluid on which the tubercle bacilli have been grown. The later preparations offered by Koch, viz., Tuberculin T.R. and the New Tuberculin, or T.B. Emulsion, are not sufficiently active, because the former lacks some of the important constituents of the tubercle bacillus, while the latter contains the bacillary bodies, at least in fragments, so that the organism is obliged to dissolve them and extract the substances which then stimulate it to the production of immune bodies. In his preparation of the Watery Extract, Dr. von Ruck had almost a perfect immunizing agent, because it contains the body substances of the tubercle bacillus in solution. In his New Vaccine he has perfected the remedy by a quantitative adjustment of the various constituents of the tubercle bacillus,

Since we are now able to effect an active immunization against the tubercle bacillus, not only in the tuberculous organism, therapeutically, but also in the non-tuberculous, prophylactically, just as we vaccinate against the virus of smallpox, we have the means at hand for a successful crusade against tuberculosis—a method which attacks the problem at its most important point, namely, in the susceptibility of the human and animal organism to the pathogenic action of the tubercle bacillus. It is apparent that the prevention of tuberculous infection and of tuberculous disease is more promising in its ultimate effects than the cure of the disease. It will be along the line of prevention that an active fight will be waged, and with a specific remedy of prophylactic immunization the struggle against tuberculosis will eventually become victorious.

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Deductions From an Instructive Series of One Hundred and Twenty-Five Consecutive Major Operations with no Mortality.*

By Dr. B. B. Steedly, Spartanburg, S. C.

The distinction between a major and a minor operation is an entirely arbitrary one. Text-books on surgery do not mark the line of division and the Medical Dictionary simply defines a major operation as "A surgical procedure capable of causing death." This is unsatisfactory, since even the slightest break in the skin may by accident become infected and produce death. However, since all intra-abdominal operations are considered major, even simple appendectomies and oophorectomies, I have included in this series only all operations of equal importance with these. Thus, while a simple curettage of the uterus or a perinaeorrhaphy, or the two combined, should not be classified as anything more than a minor procedure, if to these is added a plastic operation on the anterior vaginal wall, such a combination of operations (which is frequently done for cystocele and rectocele or procidentia uteri) becomes, by reason of the more extensive denudation and greater amount of technical skill required in its proper performance, a major operation. Certainly, the novice in surgery who attacks these tedious plastic cases is bolder than he who undertakes simple abdominal work.

It is not my intention to give case histories in this series, but merely to call attention to salient points in connection with different groups of cases which have impressed me as being worthy of emphasis.

This series represents 125 separate anæsthesias. Where more than one operation

*Read before Tri-State Medical Society.

was done on the same patient, e.g., a D & C, perinaeorrhaphy, shortening of the round ligaments, and appendectomy, only the most important part of the operation is counted, as, in the case cited, the appendectomy.

LIST OF OPERATIONS.

For chronic appendicitis	37
For acute appendicitis	31
For bilateral salpingo-oophoritis	3
For cancer of uterus	5
For fibroids of uterus	6
For uterine hemorrhage in arterio-sclerosis	2
For fracture of skull	1
For sub-dural cyst	1
For floating kidney	1
For cancer of transverse colon	1
For chronic intestinal obstruction	2
For gall stones	7
For exophthalmic goitre	1
For cystic goitre	1
For vesical calculus	1
For intra-vesical hemorrhage	1
For oblique inguinal hernia	3
For placenta previa	1
For gunshot wound of the abdomen	2
For vicious union of radius (Lane plate operation)	1
For intestinal adhesions	1
For prolapse of uterus	2
For general peritonitis from gunshot wound	1
For tubo-ovarian abscess	1
For post-operative hernia	1
For pelvic abscess	2
For empyema (excision of portion of two ribs)	1
For prostatectomy	2
For mastoid disease	1
For chronic suppuration of maxillary sinus	1
For tumor of the submaxillary salivary gland	1
For cancer of stomach (exploratory)	1
For open safety pin at lower end of œsophagus	1
For Cæsarean section for eclampsia	1
	125

My largest number of cases was for acute and chronic appendicitis, 31 acute and 37 chronic. I am impressed with several points of interest in connection with these. First, there was a slightly larger number of chronic than of acute cases, which goes to show that people are beginning to realize the extreme safety of internal operations, whereas, only a few years back (and often under the advice of their family physicians) many would have waited for another attack. Second, a number of these acute cases had gone on to abscess formation and two to general peritonitis, not having walled off. This shows that in many instances the attendant was too slow in reaching his conclusions or advising operation. How long will it take the family physician to realize that appendicitis is not a medical disease? The third point to which I should like to draw attention is the detail of handling these localized abscess cases. First, as regards the incision; having tried approaching them through an incision on the median side, right rectus incision, and through a McBurney incision directly over the mass or to its outer side, enlarging this by cutting into the sheath of the right rectus or by cutting the internal oblique and transversalis upward or downward, as needed, I am convinced that either approach is satisfactory, but personally I more frequently use the McBurney incision, modifying it to suit the case. This approach necessitates during the manipulation a minimum of contact with the small intestines, thus lessening the liability of transferring the infection to uninvolved portions, and the drains, emerging through the incision, pass more on the outer side of the intestines than if they emerged through a rectus incision. Hence, there would be less vicious adhesions to follow. Though I have removed the appendix in all of my cases, I believe it a safer practice, after evacuting the pus, not to be too vigorous in the search for and removal of the source of the trouble, since statistics (Kelly and Noble) show that only one in twenty of those give trouble later, and this five per cent. can be handled to better advantage when necessity arises again. The class of cases in which I deem it specially undesirable to prolong the search for the appendix is where the abscess has become adherent to the anterior abdominal wall and the incision passes through the adherent parietal peritonaeum, opening directly into the abscess. If the appendix is not now seen or felt distinctly and easily removable, the simple inserting of drainage should terminate the operation, as up to this stage there has been incurred practically no danger, whereas, to enlarge the incision may open a communication between the abscess cavity and the general peritoneal cavity, which unquestionably introduces a real element of danger. In dealing with these cases, my experience justifies me in believing that the interests of the patient are best subserved if the surgeon occupies the position of (if I may coin a word) an appendicitectomist rather than a headstrong appendectomist.

Twelve hysterectomies are included in this series, six for fibro-myoma, four for carcinoma, and two for arterio-sclerosis. Eleven were removed by the abdominal and one by the vaginal route. There was noth-

ing unusual about these cases except that the carcinomata were in the incipient stage with good chances for radical cure. This is gratifying in that it is indicative of a greater alertness on the part of physicians to recognize cancer of the uterus before it has advanced too far for radical measures to be effective.

There were seven cases of gall stones, the cystic duct being obstructed in two, empyema of the gall bladder in one of these. In two simple cases I did a cholecystostomy, for the remaining five a cholecystectomy. Formerly I performed a cholecystectomy less often, but after having a fair percentage of my cholecystostomies continue to suffer and finally return for a cholecystectomy, I have determined to remove the gall bladder in all except where there exists no thickening or other gross abnormality in its walls.

Prostatectomy—2 cases. I performed these by the perineal route, using Young's technique. They were in patients 58 and 62 years of age and the functional results were perfect. In one case, at the end of about two and a half weeks blood appeared in small quantities in the urine and after three or four days the bladder filled rapidly with blood, which, in the course of a few hours, reached to the umbilicus. He suffered greatly from this and passed a little urine and blood clots per urethram. Under gas and oxygen I did a suprapubic cystotomy and located the bleeding point at the vesical neck within the grasp of the sphincter. I passed iodoform gauze through the bladder and out at the perineal wound, packing it against the bleeding point, inserted a double flow drainage tube through the suprapubic incision, and closed around it. Convalescence was after this uneventful.

Two cases of gunshot wounds perforating the abdomen. In one of these, three No. 6 bird shot entered the left half of the abdomen on its anterior aspect. I made an incision through the left rectus near the median line and was able to see the three points where these shot had entered the cavity. Tracing the colon, it showed no perforation and the bladder also was uninjured, but eight perforations were discovered in the small intestine between the ileocæcal junction and the duodeno-jejunal angle. These perforations having been produced by small shot, the question suggests itself, "Would such perforations result in peritonitis if not sutured?" My conclusion is that this would not invariably follow; for about one half of those in this case appeared not to be leaking, whereas the remainder had allowed intestinal contents to escape, as shown by well marked irritation of the adjacent peritonæum. The difference in the behavior of small perforating wounds is probably due to the direction in which the intestinal wall is penetrated—that is, whether at a right angle or obliquely—and also to the state of distention of the viscus.

The other case of gunshot wound was from a 38 calibre pistol, one bullet having fractured the forearm and another entering the abdomen through the left loin near the posterior axillary line. Probing this led me to believe that probably only the descending colon was injured, so I made an incision, such as is commonly used for operations on the ureter, though opening the peritoneal cavity. I sutured two perforations in the colon and, examining as much of the small intestine as practicable through this incision, found two others, which I sutured. Trusting that this was all, I closed with drainage. Two and a half days later the patient was desperately ill with a general peritonitis. An incision through the median line disclosed two additional perforations in the small intestine. Suturing these and making four stab wounds for drainage (six drainage openings in all) saved the patient. This case is instructive as showing the extreme importance of making a primary incision which will permit of examining all the viscera possibly in the track of the bullet.

One case of cancer of the transverse colon, which was in a woman aged 77 and formed an easily palpable tumor. I removed the tumor and the adherent omentum, including healthy intestine on the proximal and distal sides together with the enlarged glands included in the transverse mesocolon and united the bowel with an end to end suture. She did well for a few months and began to have a recurrence, as shown by a return of obstructive symptoms and nodules in the abdominal wall. Then I did a lateral anastomosis between the cæcum and sigmoid, which has prolonged her life thus far. I believe, however, it is wiser in most of these advanced cases to do a palliative operation at first.

One case of chronic suppuration of the maxillary sinus. This patient had suffered about one and a half years and had despaired of being cured. One operation by the dentist, extracting a tooth and opening through the floor, had failed, and also an opening through the inner wall had not succeeded in arresting the discharge, which had become quite offensive. I performed the Caldwell-Luc operation, opening the anterior wall freely for exploring and cleaning out the cavity, and chiselled through the inner wall near the floor for drainage into the nostril. I believe that, if these

cases of antral suppuration were given free drainage earlier in the acute stage, such radical measures would seldom be necessary.

Gastrotomy for the removal of an open safety pin 1 inch long. This was in a baby nine months of age. Three radiographs taken at intervals of 24 hours showed the pin in the same position, arrested at the oesophageal opening in the diaphragm, the point of the pin and opening being directed downward. I had devised a means for extracting this pin from the lower end of the oesophagus and by way of practice executed the manoeuvre a number of times on a pin similarly placed in a piece of rubber tubing, though I did not have the opportunity of using the method on my patient, as my manipulations preparatory to opening the stomach had dislodged the pin and I found it in the stomach several inches nearer the pylorus. It may be of interest to describe the simple plan I expected to try. Firmly fix the lower end of the pin by clamping it. Give to the loop of a cold wire snare a slight lateral bend and, having drawn the loop down to about the size of the oesophagus, pass it up through this tube to a point beyond the upper end of the pin. Withdraw the loop and, as it is felt to have caught over the pin, tighten the snare somewhat, then, with one hand holding the snare and the other holding the clamp attached to the lower end of the pin, push the latter gently up to dislodge the point. Now close the pin by tightening the snare, when all can be withdrawn together.

Only one other case in this series is worthy of mention—a Caesarean section for eclampsia. This is especially interesting because it was for twins, the head of one occupying the left upper portion of the uterus and the face of the other presenting at the cervix, which was dilated to the size of a quarter. The membranes of the baby with the face presentation had ruptured eight or ten hours previously and the liquor amnii had been draining away freely. The patient had two convulsions before the operation, none after. She progressed nicely and at the end of a week was considered out of danger and was feeling well, as evidenced by her good appetite and free use of the hand mirror. This is my fourth Caesarean section for eclampsia. The other three cases had a number of convulsions before operation and a few afterwards, though each made a good recovery. I believe this to be the operation of choice in primiparæ when eclampsia occurs before the cervix is dilated. It can be accomplished much more quickly—20 to 30 minutes—and the trauma inflicted is much less. Of course, it is infinitely easier on the child, as it is simply lifted out and handed to an assistant instead of being tugged at for perhaps an hour or two.

It is but fair that I mention a sequel to this last case which has transpired since announcing my subject. On the ninth day after her operation she developed severe abdominal pain and later tenderness over McBurney's point. After several hours there was a sudden cessation of the pain but with a rising temperature. She reluctantly agreed to operation, which I did under gas and oxygen, and found a perforated appendix with considerable free fluid in the abdominal cavity. I removed the appendix and inserted drainage. There then followed an increasing difficulty in moving the bowels and vomiting, necessitating gastric lavage two or three times daily. By the fourth day the obstruction was complete—castor oil administered the previous day was recovered with the stomach washiug. There was an entire absence of rigidity and the waves of peristalsis could be observed through the abdominal walls. The temperature since the appendectomy had been normal to subnormal. There were stupor and delirium. I re-opened the abdomen through the Cæsarean incision under novocain anæsthesia. The jejunum was most distended, the lower ileum and colon flat. I untwisted a volvulus of the ileum and drained off the accumulated fluids and gases by attaching a rubber tube to the most prominent loop of the jejunum. There was no vomiting after this operation, the bowels moved from one to several times daily, and the abdomen remained flat and soft. Unfortunately, on the third day her delirium deepened into coma and hypostatic pneumonia began developing, her temperature and pulse increased and remained high till her death on the tenth day after her last operation.

It is interesting to note the condition of this patient's urine at various stages. Before the advent of the pneumouia the albumen, though still heavy, had reduced one half and the specific gravity had risen from 1003 to 1008, but this complication increased the albumen so that it boiled almost solid and caused the specific gravity to fall again to 1003. These characteristics remained to the end, although the quantity of urine was sufficient except for the couple of days preceding the operation for intestinal obstruction.

Pointers on the Treatment of Still Born Babies.

By C. W. Hunt, M.D., Brevard, N. C.

Please allow me space for a few remarks upon the above subject. All of the authorities have thought of all the big things. If

I were to think of a big thing you know that it would not be "regular" to mention it without first consulting said big authorities. I have thought of little things about little patients, of which I have never seen any special mention.

A few years ago I reported to one of our leading medical journals, in treating a still born baby, my practice of dilating the sphincter anni with my fingers to excite respiration. This was published, with a statement from the editor that he had never heard of this treatment for this purpose, had only heard of its use in chloroform narcosis.

On the third of May I had a very difficult case. I worked an hour before the baby became fully alive.

Dilating the bowel will often cause a gasp and start respiration when everything else fails. In this case it only did a little good and something else seemed to be the matter, and I saw that I was up against it. This baby was still born and very still, and perfectly blue. I dilated the sphincter repeatedly, and it produced a decided impression, causing efforts at respiration, but the machinery would not work. I found two obstacles which I think well worth mentioning: the throat and nose were filled with phlegm, baby could not breathe; this was removed, and the gasps for breath were a little bit improved, still the machinery, automobile like, failed to work, without any known reason. During this time air was blown into the nose and mouth, face sprinkled with cold water, while baby was in a vessel of warm water, did every stunt in the way of artificial respiration, even held babe up by the heels, still the little fellow was very blue, and we likewise. Next impediment, we found that the tongue was retracted and rolled back so that the baby could not breathe; pressing it down with the finger helped a little, but it filled the mouth too much, then we used the handle of a small spoon to depress the tongue and pull it forward, by a forward tuck with the curved end of handle; this was a great help and a few and better gasps were made.

I believe that a faulty position of the tongue is often a cause of failure to bring these babies to life, also the phlegm and mucous. While working with the spoon, and trying to blow in air at the same time, I said to myself (I always like to talk to an appreciative and good looking man) that I wished I had a spoon handle that was hollow, and that we should have an instrument of this kind always in our obstetrical bag. With an instrument of this kind we could blow in air, or better, inject air with a Davidson syringe while we depressed the tongue.

I took one side of an old stethoscope, the tube part, had it made straight, and large end flattened, and one half of the large end cut off, this left a little shoulder, near the end, giving a square edge with which to pull the tongue forward as it is depressed; as before stated the tube being hollow air can be furnished the baby while the tongue is depressed.

I believe that a great many still born babies fail to answer to our efforts at artificial respiration on account of mucous in mouth, throat and nose, and to retraction of tongue.

Another use for this instrument: the bulb that was on it to go into the ear, when used as a stethoscope, was removed and the threads cut off and the end made perfectly smooth, then the bulb was placed on as a mouth piece when used to blow air into the mouth. When far from home and no catheter is in reach and the woman's bladder is too full, the bulb can be removed and the water drawn with this instrument, after proper boiling of instrument.

Pathogenesis of Inflammation of the Urethra and Adnexa. A Study Based on a Series of Complement Fixation Tests.*

By Thos. V. Williamson, M.D., Genito-Urinary Surgeon to Protestant Hospital, Norfolk, Va., and Samuel W. Budd, M.D., Associate in Pathology, Medical College of Virginia, City Bacteriologist, Richmond, Virginia.

It seems to us, since we are living in an era of eugenic unrest and upheaval, that it is not inappropriate to take this subject into consideration at this meeting of the society. The line of thought and research followed in this paper, as far as we can ascertain, is a comparatively new issue and we had hoped, when the idea of bringing it before you was first conceived, to have developed this study more exhaustively and in greater detail. Time has not permitted us to go as far as we had wished. Therefore, we beg you to regard our views, for the present moment, as tentative, only; to consider us in the light of students who feel that they are just beginning to see in the dawn of accomplishment.

The complement fixation test is a modification of the Wassermann technique, in which a gonorrheal emulsion or antigen is substituted in the place of the syphilitic preparation. This test was first employed by Mueller and Oppenheim in 1906 in the diagnosis of arthritis. They found that it gave a positive reaction in the gonorrheal type of the disease. Schwarts and McNeil

*Read before the Tri-State Medical Society.

then applied it to all forms of gonorrheal infections. They first used an antigen prepared from six strains of gonococci, only, and found that it was unreliable because it did not embrace all the different strains known to the bacteriologist. They rightly concluded that it was useless to test for one strain with an antigen obtained from a different strain. They secured far better results by using a twelve strain antigen as the possibility of error was thus reduced to a minimum by covering a wider field in dealing with the infecting agent. This later antigen is the one employed today. The historical reference is made merely for the purpose of refreshing your memory. Since the laboratory specialist is the only man capable of carrying through the test, the technique will be omitted.

It is not the purpose of this paper to attempt to prove the value of the complement fixation test as an adjunct to our clinical facilities. This has already been done by Keys, Schwarts, McNeil and others. They have shown that the test is negative in the first few weeks of an acute specific urethritis due to the fact that toxins have not been absorbed in sufficient quantity to stimulate the formation of antibodies in the blood; that the blood gives a positive reaction after the first few weeks when the gonococcus is undoubtedly present; that a positive reaction is frequently obtained in cases not clinically cured when all other laboratory tests have failed to detect the presence of gonococci; that the test is sometimes positive for several weeks or months after a clinical cure by reason of the fact that the system is slow in eliminating the antibodies; and, finally, that when a short time has elapsed after a clinical cure the test is uniformly negative.

They conclude that a positive reaction, except in the narrow limits described above, is indicative of a focus of infection remaining in the body and that it is sufficient grounds to refrain from pronouncing a cure, to interdict intercourse and to prohibit marriage.

Therefore, since the value of the test has been fully demonstrated by their observations and experience, we did not deem it expedient to tax your indulgence by presenting a mass of corroborative data. We have centered our efforts more especially on that class of cases which are not clinically cured but in which repeated examinations have failed to determine the presence of gonococci. We undertook this work in order that we might arrive at a clearer understanding of these long continued and puzzling forms of inflammation. With this end in view, we have selected only those cases which seemed to us to be pertinent to the question at issue. These cases are all taken from private practice because we found that they gave a more reliable history and could be more intelligently followed throughout the course of the disease than were true of clinic patients.

The technique of obtaining specimens for bacteriological examinations was as follows: The patient was instructed to report at the office with a full bladder, and on the first visit the urine only was examined. On the second visit the anterior urethra was thoroughly cleansed by an irrigation of saline solution. This was done to get rid of the mixed mass of micro-organisms which almost constantly lurk around the meatus and in the fossa navicularis. The prostate, seminal vesicles and posterior urethra were then vigorously massaged and the expressed secretion caught on a sterile slide or in a test tube. The urine was then passed and saved for the centrifuge. Examinations were made from both the urine and the undiluted secretions.

Remarks results shown by table.

Cases 1 and 2 in class A show a negative reaction because no antibodies have been formed by toxins, while 3 and 4 are positive because the disease has existed long enough to make the antibody phenomenon possible. These cases are listed to prove that our tests were running true to the accepted principles governing the reaction.

All cases in class B came to us while gonococci could still be found in the discharge. Under a variable course of treatment gonococci disappeared and the fixation tests were, in each individual case, taken several months after we could no longer find them. Cases 5 and 6 gave a doubtful reaction on the first examination but were negative one month later.

Class C embraces only those cases in which no gonococci could be demonstrated at the time of presentation, but each case gave a history of a primary gonorrheal infection and the present condition dates from that infection.

Class D consists of cases clinically cured, which, with the exception of No. 24, showed the presence of gonococci when treatment was instituted. In only two out of the seven cases were secondary organisms found. It would seem from this that under adequate treatment secondary infection is not as prone to happen as is the case with more or less neglected instances. We think this fact is very striking.

The day is not long past when pathology, as we now define the term, was unknown; when bacteriology was unheard of and when knowledge of inflammations of the urethra and adnexa was vague and nebulous. Surmise and theory existed in lieu of scientific

	CASE NO.	DURATION OF INFECTION	CLINICAL CONDITION	REACTION	BACTERIA PRIMARY,	BACTERIA SECONDARY,	BACTERIA AFTER CURE.
	1	1 month	A. U.	Negative	Gonococci		
Class A.	2	3 weeks	A. U.	"	"		
	3	6 weeks	A. U.	Positive	"		
	4	4 months	A. U.	"	"		
	5	18 months	C. P.	Negative	"	Strepto.	
	6	6 months	" "	"	"	None	
	7	8 months	C. U. " "	"	"	Staph.	
Class B.	8	16 months	" " " "	"	"	Staph.	
	9	9 months	" " " "	"	"	Staph.	
	10	15 months	" " Stricture of Urethra				
	11	5 years	C. U. C. P.	"	None	Micro. Cat.	
	12	2 years	" " " "	"	"	Dypth. Bac.	
	13	18 months	" " " " "	"	"	Staph.	
	14	6 months	" " " " "	"	"	No exam.	
Class C.	15	3 months	" " " " "	"	"	Staph.	
	16	10 months	" " " " S. V.	"	"	Staph. Strepto.	
	17	8 months	" " " "	"	"	None	
	18	4 years	" " " "	"	"	Staph.	
	19	Uncertain	A. U. C. P. Cured	"	Gonococci	Staph.	
	20	1 year	C. U. "	"	"	Strep.	None "
	21	1 year	" " "	"	"	None	" "
Class D.	22	6 months	A. U. " "	"	"	"	" "
	23	6 weeks	" " "	"	Gram Positive Dip.	"	" "
	24	5 months	" " " "	"	"	"	" "
	25	6 months	C. U. " "	"	Gonococci	"	" "

NOTE:
A. U.—Acute Urethritis.
C. U.—Chronic Urethritis.
C. P.—Chronic Prostatitis.
S. V.—Seminal Vesiculitis

certainty. Then Neisser discovered the gonococcus and synchronously the pathologist demonstrated that the posterior urethra, prostate, seminal vesicles and even the scrotal contents were invaded by direct extension and progression of this inflaming micro-organism, leaving end results in the ravaged tissues which were recognized as distinct pathological entities.

It has been thirty-four years since Neisser made his great discovery and our knowledge concerning the diplococcus which bears his name has steadily increased since then. He taught us to stain it with the basic analine dyes; Gram showed that it decolorized by his technique; Bumm cultivated it upon blood agar and finally the complement fixation test has been added to the quota of laboratory methods of diagnosis.

At first, any intracellular diplococcus which flourished on the urethral mucous membrane was called the gonococcus. The pseudo-gonococcus proved the fallacy of this belief, and, as the technique of examination improved, other diplococci and so-called forms of plain cocci and bacilli added to the confusion. Gram's strain could not always be relied upon as a differentiating point between these bacteria, as some of them were decolorized by this method just as easily as the gonococcus. Culture when positive was, of course, absolute proof of the existence of the gonococcus but it was so frequently negative, by reason of an overgrowth of other bacteria, that in the long run it was rather uncertain and undependable.

In many cases one test was enough to establish the identity of an infection as gonorrheal; in others, all tests failed to ultimately convince the clinician of the presence or absence of the exciting cause of inflammation. The difficulty of demonstration progressed directly with the course of the disease. It was easy enough to find the gonococcus in nearly all cases of acute urethritis, less easy in the subacute forms and frequently impossible in the chronic stage.

And so we arrive at the present day, with the advent of the complement fixation test. We find this diagnostic process uniformly positive when the gonococcus is undoubtedly the exciting factor of disease, but it, too, becomes negative with the lapse of time. And we ask, why are all these tests so uniformly positive in acute specific urethritis? Why do they become doubtful in the declining periods? What makes them so consistently unreliable as urethral inflammation reaches the aspect of chronicity? There must be some reason for this. Error evidently lies either in the established belief that the gonococcus lives indefinitely or in the methods we use to detect its presence.

The gonococcus is almost always the only micro-organism found in acute clap, while quite often as the severer symptoms fade and wane, other bacteria become associated in keeping the inflammation alive, until, finally, staphylococci, streptococci, colon bacilli, pseudo-diphtheriæ, etc., seem to be the sole survivors in the nutritious urethral feeding ground. In this contingency, the gonococcus is gone as far as all tests are able to show and its place is taken by a vast array of secondary invaders that keep up a chronic inflammation for years and, as far as the patient himself is concerned, do untold damage by the pathological changes wrought in the genito-urinary mechanism.

Study shows that bacterial flora of the urethra is numerous and varied. Staphylococci, streptococci, colon bacilli, pseudo-diphtheriæ, micrococcus-catarrhalis, micrococcus urinæ and other species flourish there normally but, under ordinary resistance of the host, they are harmless. In other words, although they live in the urethra, they do not primarily infect its mucous membrane. Some avenue of entrance must be created for them before they can act. The gonococcus enters the canal, spreads by direct continuity throughout the anterior and in 90 per cent. of all cases travels into the posterior urethra, quite frequently involving the adnexa. It leaves the mucous membrane denuded and excoriated behind it. A secondary infection then takes place through this injured membrane by the normal inhabitants of the urethra. To be bacteriologically exact, these secondary bacteriæ are not necessarily inhabitants of the urethra. They may come and, in many cases, do come from the rectum, large intestine, bladder or kidney. In the end—probably after many months of conflict—these secondary hordes, being more virulent and aggressive, are left in sole possession of the field. It would seem, therefore, that in a great number of cases, a primary gonorrheal urethritis is followed or supplanted by a secondary infection of one or more other micro-organisms.

Dr. Keys in a recent article says, "Surely none of us has any precise idea how long the gonococcus may survive in the glands that empty into the male urethra, for if they may survive a year or two who shall deny them a decade? Not I, for one. And yet I have never seen it. I have never known the gonococcus to survive in the male host for over three years."

Years rich in experience backed by abundant laboratory support gave Dr. Keys the temerity to make this statement. He has never known the gonococcus to survive

in the male host for over three years. And our experience teaches us the same thing. Our research leads us to corroborate his assertion. It has been our experience that the gonococcus is rarely found after two years; that we do not often find it after twelve months and that it usually disappears in much less time under thorough, adequate treatment.

Frankly, we feel that the medical profession is just crossing the threshold of a new era in many of its theories and beliefs. Salvarsan and the Nagouchi, Wassermann, and Luetin tests have forced us to re-learn our lesson about syphilis; knowledge of kidney infections which pertained a few years ago has been replaced by a better and truer understanding, and the vaccine and serum therapy has carried us into broad and fertile fields of new thought. The most ingrained pessimist could not accuse the medical profession of being tinctured with inertia for the past fifty years. It has steadily and resolutely advanced, but, nevertheless has been singularly free from the savor of radicalism. The whole trend of thought, the whole spirit of progress, in theory and concept, has been alive with the vital element of well-balanced progressiveism. Should we wonder then that our ideas relative to the long life of the gonococcus should change somewhat?

We fully admit that our faith and credence in mankind is being somewhat vigorously assailed by cold, precise, unfeeling, laboratory science. And when we recall that about one third of the cases of acute specific urethritis seen in private practice are in married men, those supposed moral pillars of the body politic who have contracted the disease extra domo, we must confess that we are inclined to judge our old enemy, the gonococcus, in a more lenient and charitable spirit.

"Robinson's Elixir Paraldehyd." 10 per cent, Paraldehyd is hypnotic and anodyne. It calms restlessness and insomnia, and procures unbroken sleep from four to seven hours duration, and to leave behind neither languor, nausea nor digestive disorders. It also acts as a diuretic. It has been found efficient in the insomnia of various acute diseases, and also in acute mania. It is proposed as possessing the good without the evil qualities of chloral. Nat. Dis., 3d Edit, P., 151.) Robinson-Pettet Co., incorporated. (See page xiv this issue.)

June (Travel) Century.

Not only a goodly number of travel articles, but seven stories, and a great many pictures, including full color reproductions of paintings and Century colortones, go to fill the 168 pages of the June (Travel) number of The Century, the cover of which is a landscape by George Inness, Jr., printed in full colors. Arnold Bennett gives a narrative of personal adventure under the title "From the Log of the Velsa." It seems that his holidays are spent in a small auxillary sloop in the Forth Sea and in the waters of Holland. The illustrations are painted by his traveling companion, E. A. Rickard. The biographer of Mark Twain, Albert Bigelow Paine, in "The Car That Went Abroad," tells of the successful carrying out of a plan to take the whole Paine family on a European trip in a small automobile at a very low cost. "A Painted City of the Spanish Main" is a bit of colorful description by Julius Muller. E. F. Benson, author of "Dodo's Daughter," described "The Dewan-i-Khas, or Hall of Private Audience," at Delhi. Fiction of the number begins with a graduation-time love story by Maria Thompson Daviess called "Digging Up Sam." There follow "The Old Soldier," by Eden Phillpotts, the scene of which is laid in Dartmoor; a story of sentiment, "The Old Road." by Marion Pugh Reed; "Sweet Pea," the tale of a polo pony, by Rodman Gilder; a story of which a negro is the chief character, called "The Ishmaelite." by Elsie Singmaster; a story with a thrill, "The Seventh Glass," by Frederick Arnold Kummer. The most progressive contribution to this number, and one which expresses to the full the "new spirit of the Century," is a well-wrought story, "The Romaunt of the Rose," founded on the life of Francois Villon, written by George Bronson-Howard, which will be run simultaneously as a series of film plays in moving picture theatres. There are pages gathered from the great sculptor's diary under the title of "Rodin's Notebook," "Reminiscences of Tolstoy" by his son, Count Ilya Tolstoy; a paper on the "Scandinavians in America," by Prof. Edwaru A. Ross; an open letter by Herman Bernstein entitled "What About Russia?"; "The Tariff Out of Politics," by James Davenport Whelpley, and a number of poems. Eleven authors and artists contribute to the comic section, "In Lighter Vein," which continues to be an important feature of the magazine.

"Elixir Saloform Comp., Flexner. "Contains 20% Alcohol. An efficient remedy for Rheumatism, Gout, Cystitis and Uric Acid Solvent. Prepared for physicians' prescriptions only. Robinson-Pettet Co., incorporated. (see page xiv this issue.

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

REASONS FOR POSITIVE AND NEGATIVE REACTIONS TO LIGHT OF SMALL EYELESS ORGANISMS.

In an address on Elementary Forms and Phenomena in the Evolution of Visual Perception, delivered before the Biological Club of Yale University recently, Dr. George T. Stevens advanced some new views in regard to phototaxis in organisms not endowed with special visual organs.

After describing the actions of some minute plant organisms and some protozoa he called attention to the fact that these organisms, under the stimulus of light, are differently affected according to a comparison of the diameters of the individuals with the length of light undulations. "A question," he says, "which must, in the nature of the facts, arise in our minds is: Why should one class of these minute structures be positively while another is negatively reactive to light? Why should one class seek the light while another avoids it, or why should a single organism be at one time indifferent to light and a moment later negatively affected?

Without attempting an answer which would be complete in every respect it is suggested that in the diameter of the organism compared with the length of a light wave we may find a reason for the preference of these minute creatures. The length of the luminous wave, of course, depends upon its position in the spectrum. If a wave, the length of which we might regard as approximately a medium one, acts upon a being with a diameter less or only within certain limits greater than the length of the wave it would agitate the organism in such a way as to affect it unfavorably. We might rudely compare the action to that of a big water wave which rocks a boat. Even should the diameter of the little plant be two or three times the length of the light undulation it would still be disturbed. A broader organism, which might by its breadth ride over several light waves, might be indifferent or perhaps agreeably affected, depending on the form or size of the organism. Hence we find that, in general, extremely minute organisms are negatively affected as are also those whose diameter does not exceed two or three times the length of an average light wave, while on the other hand organisms without definite visual organs exceeding this in diameter are indifferent or positively affected by light except as will be presently noted. On the one hand we have the bacillus of tuberculosis and a host of other organisms of which we are accustomed to speak as disease germs, all of which bury themselves in the dark. On the other hand we have a multitude of small organisms but of greater diameter which bask in the light on the surface of sluggish streams or even ride on the swell of an ocean wave. These last, when in captivity, generally swim toward the illuminated side of an aquarium or they are possibly quite indifferent to the influence of light.

Among protozoans the amœba is not, when no pseudopodia are extended, especially sensitive to light, but, when a pseudopod, in the form of a slender thread, is extended the little organism is at once negatively sensitive and under the influence of the light of the mirror of the microscope it either draws the pseudopod within the mass of the sarcode or halts its movements altogether.

There remain, however, organisms of considerable size without visual organs which are negatively affected by the light. Included in this class, and it is a large class, is the common earth worm. In this case the fine cilia found at the joints, especially the anterior joints, may be the sensitive or vibrating parts which warn the worm of its danger when exposed to the light. In this case and in others there may be and probably are other influences which react upon the organism combining with the effect of the light waves to send the organism into the dark.

When the organism is endowed with ocelli or with eyes the character of the rods of the retina serve as the determining factor whether the effect of light is agreeable or otherwise. When the vibratile retinal elements are unusually long and slender the luminous waves, if at all intense, are unpleasant, while rods of less longitudinal extent or of greater diameter may be pleasantly affected.

The North Carolina State Board of Medical Examiners will hold its fifty-third regular annual session for the examination of applicants for license to practice medicine in North Carolina in Raleigh, N. C., beginning June 9, 1914. The Medical Society of the State of North Carolina also holds its sixty first annual session in Raleigh one week later, on June 16, 1914, under the presidency of Dr. J. M. Parrott, Kinston, N. C., Dr. John A. Ferrell, Secretary, Kaleigh, N. C. The North Carolina State Health Officers Association will hold its annual meeting on the day preceding the

beginning of the sessions of the State Medical Society, Monday, June 15, 1914. The annual conjoint session of the State Medical Society and the State Board of Health will be held on Wednesday June 17. The session of the Board of Examiners will probably conclude its labors on the second day of the Society's session. In this way the various organizations and State functions of the regular medical profession are performed in a massing of the meetings of the different professional aggregations in a way that is most helpful and interesting to all. It also tends to conserve and further develop the cause of medical solidarity and further unite the various medical bodies of the State. This holding of the various medical meetings at the same time and place is rather a peculiar North Carolina custom originating in 1859, the year the State Board of Medical Examiners held its first meeting, and as the needs of the profession and people have developed the other allied societies and boards, they naturally follow the established precedent of meeting at the same time and place with the parent organization, the State Medical Society. Besides conserving and holding most closely together the different professional bodies, the custom is a great time saver to the busy physician in that he is enabled to take part in the various meetings, thus keeping in close touch with all the organized professional interests of his State, with the minimum expenditure of time and money. In many States, the work of the State Board of Examiners and of the State Board of Health is separate and apart from the State Society's annual meetings, and hence the boards and the rank and file of the profession are both thereby losers.

POMPOSITY.

There is an atmosphere about a pompous, pedantic doctor, which sends cold chills up our backs. Such an one makes us have a feeling of littleness. Of all men, the pompous, stuck-up, self-important individual, be he doctor, or something worse, gives us a sort of humiliation; not that we are willing to concede his superior wisdom and skill; but he would have us do so.

There was once a doctor—who has long been in the "beautiful isle of somewhere" —who was so pompous that he never acknowledged the acquaintance of any one who had no "handle" to his name. It was always my friend, Colonel, or Judge so and so. The bombastic ilk of by-gone days, when every doctor sported black cloth, and high hats, had the reverence and awe of the laity, that the present day medicators don't have. It is all right to be dignified, well dressed, and maintain a proper reserve in your professional intercourse. The writer, for many years, indulged in silk hats, black cloth clothes, and high-heel boots; and in fact, every physician and minister dressed that way; and it inspired more reverence from the public. It was like the robes, and ermine of court. While dignity and "pomposity" may be overdone, yet there ought to be more of the first. If a man is dignified, and looks wise, he will get the credit of being learned, whether he is or not! Then the language should be choice, and chaste, but not pedantic. F.

TENTATIVE PROGRAM

Sixty-First Annual Meeting Medical Society of the State of North Carolina

RALEIGH

Tuesday, Wednesday, Thursday,
June 16, 17, 18, 1914
10:00 a. m.

North Carolina Public Health Officers' Association.

Fourth Annual Session
Monday, June 15, 1914, 9:30 a. m.
Raleigh.

Dr. G. M. Cooper, President, Clinton.
Dr. Wm. M. Jones, Vice-President, Greensboro.
Dr. W. S. Rankin, Secretary-Treasurer, Raleigh.

Program.

Chamber of Commerce, 9:30 a. m.

1. Address of Welcome—Mr. Clarence Poe, Raleigh.
2. President's Address: "Public Health Work in North Carolina"—Dr. G. M. Cooper, Health Officer of Sampson county, Clinton.
3. Secretary-Treasurer's Report—Dr. W. S. Rankin, State Health Officer, Raleigh.
4. Appointment of Committees:
   (a) Nominating Committee.
   (b) Auditing Committee.
   (c) Resolutions Committee.
5. "State Responsibility for Human Life"—His Excellency, Locke Craig, Governor of North Carolina.
6. "The State's Malarial Problem"—Dr. H. R. Carter, U. S. Public Health Service, Baltimore, Maryland.
7. "The States" Tuberculosis Policy"—Dr. L. B. McBrayer, Chief of Bureau of Tuberculosis, State Board of Health, Montrose, N. C.

Chamber of Commerce, 2:30 p. m.

5. "Sanitary Instruction of School Children"—Dr. B. W. Page, Health Officer of Robeson county, Lumberton. Fifteen minutes. Discussion opened by Dr. Chas. T.

Lesbit, Health Officer of Wilmington; continued by Dr. Geo. W. Long, County Physician, Graham county; and others.

9. "How to Get Defective School Children Treated"—Dr. D. E. Sevier, Health Officer of Buncombe county, Asheville. Fifteen minutes. Discussion opened by Dr. H. H. Utley, Health Officer of Johnston county, Smithfield; continued by Dr. C. Deligny, County Physician, Troy, N. C.; and others.

10. "The Medical Inspector's Relation to Mentally Defective Children"—Dr. H. W. Chase, Professor of Philosophy of Education, University of North Carolina. Twenty minutes. Discussion opened by Dr. Albert Root, Medical Inspector of Scnools, Raleigh; continued by Dr. L. B. McBrayer and others.

11. "Score-Card System for Sanitary Survey of School Buildings and Grounds"—Dr. B. E. Washburn, Health Officer of Nash county, Nashville. Discussion opened by Dr. E. F. Strickland, Health Officer of Forsyth county; continued by Dr. P. W, Covington, and others.

12. "Fundamental Principles in Rural Quarantine"—Dr. Arch Cheatham, Health Officer of Durham county, Durham, N. C. Discussion opened by Dr. G. S. Cox, Health Officer of Columbus county, Tabor, N. C.; continued by Dr. Sam Ellington, Health Officer of Rockingham county, Wentworth; and others.

Chamber of Commerce, 8:00 p. m.

13. "The Place of the County Physician in Health Work"—Dr. L. N. Glenn, County Physician of Gaston county, Gastonia Discussion opened by Dr. John Blount, County Physician of Beaufort county, Washington; continued by Dr. W. A. Bradshaw, Roxboro; Dr. Wm. S. Jordan, Fayetteville; Dr. J. W. Halford, Chalybeate Springs; Dr. Chas. O'H. Laughinghouse, Greenville, and others.

14. "Program for the Summer Months for the Whole Time County Health Officers"—Discussion opened by Dr. J. W. Jones, County Health Officer of Guilford county, Greensboro.

15. Election of officers.

Medical Society of the State of North Carolina.

Officers 1913-1914.

Dr. J. M. Parrott, President, Kinston.

Dr. E. T. Dickenson, First Vice-President, Wilson.

Dr. J. T. J. Battle, Second Vice President, Greensboro.

Dr. D. E. Sevier, Third Vice-President, Asheville.

Dr. Jno. A. Ferrell, Secretary, Raleigh.

Dr. H. D. Walker, Treasurer, Elizabeth City.

Dr. John R. Irwin, Orator, Charlotte.

Dr. A. S. Pendleton, Essayist, Raleigh.

Dr. D. S. George, Leader in Debate, Marshallburg.

Program.

Note: Unless otherwise stated, all meetings will be held in the Auditorium.

First Day, Tuesday, June 16.
10:00 a. m.

1. Call to order—Dr. Albert Anderson, Chairman of Committee on Arrangements.
2. Invocation—Rev. J. C. Wooten.
3. Address of welcome in behalf of city—Mayor J. I. Johnson.
4. Address of welcome in behalf of county and State—Governor Locke Craig.
5. Response in behalf of Society—Dr. D. J. Hill, Lexington.
6. President's Annual Address—Dr. J. M. Parrott, Kinston.
7. Report of Committee on Arrangements.
8. Report of Special Committees.
9. Announcements:
   House of Delegates.
   Board of Councilors.

Physiology and Chemistry.

Dr. J. W. Halford, Chairman, Lillington.

"A Physiological and Pathological Consideration of Pain, with a Clinical Application"—Dr. J. W. Halford, Chalybeate Springs.

"The Bio-Chemistry of Carbohydrate Metabolism, with a Physiologic Review"—Dr. Wm. T. Carstarphen, Wake Forest.

"Albumen in the Sputum"—Dr. C. H. Cocke, Asheville.

"....."—Dr. Lupton Pittman, Fayetteville.

Practice of Medicine.

Dr. I. M. Taylor, Chairman, Morganton.

"Crotalin in Epilepsy"—Dr. C. L. Jenkins, First Assistant Physician, State Hospital, Raleigh; and Dr. A. S. Pendleton, Clinical Pathologist, State Hospital, Raleigh.

"The Role of the General Practitioner in the Tuberculosis Problem in North Carolina"—Dr. P. P. McCain, Assistant Superintendent North Carolina Sanatorium for the Treatment of Tuberculosis, Montrose.

"Tuberculosis: The Cost of a Cure"—Dr. Thompson Frazer, Asheville.

"The Prevention of Mental Disease"—Dr. Paul V. Anderson, Richmond, Va.

"Recent Conclusions Regarding Paresis"—Dr. Isaac M. Taylor, Morganton.

"....."—

Dr. Mary E. Lapham, Highlands.

"....."—Dr. T. W. Shore, Boonsville.

Pathology and Microscopy.

Dr. J. B. Powers. Jr., Chairman, Wake Forest.

"The Flagellate Diarrhœas"—Dr. C. W. Stiles, Wilmington.

"Filarial Elephantiasis in North Carolina"—Dr. James M. Northington, Boardman.

"The Occurrence of Yaws (Framboesia) in the United States"—Dr. Edward J. Wood, Wilmington.

"Amoebic Dysentery"—Dr. Charles P. Belles, Wilmington.

"Treatment of Amoebic Dysentery"—Dr. Wm. Allen, Charlotte.

"The Relative Toxicity of Different Anaesthetics in Acute Experimental Nephritis"—Dr. William B. MacNider, Chapel Hill.

"....."—Dr. C. A. Shore, Raleigh.

Pediatrics.

Dr. A. W. Callaway, Chairman, Asheville,
Dr. Edward J. Wood, Wilmington.
Dr. Gharles Roberson, Greensboro.
Dr. Robert L. Feltz, Durham.
Dr. F. L. Siler, Franklin.
Dr. Charles S. Jordan, Asheville.
Dr. Lewis W. Elias, Asheville.

"Summer Diarrhea"—Dr. Charles S. Jordan, Asheville.

"The Overlooking of Pyelitis as a Cause of Fever in Infancy"—Dr. Edward J. Wood, Wilmington.

"Syphilis in Children with Special Reference to Modern Therapy"—Dr. Lewis W. Elias, Asheville.

Anatomy.

Dr. J. L. Nicholson, Chairman, Richlands.

"Some Pathological Anatomy of Lung with Report of Case of Abscess"—Dr. J. T. Nicholson, Bath.

"Appendicular Liver"—Dr. Richard N. Duffy, New Bern.

"Anatomy of a Dislocation of the Elbow Joint"—Dr. L, J. Arnold, Lillington.

"Surgical Anatomy of Regis Tonsilloris"—Dr. Addison G. Brenizer, Charlotte.

"The Anatomy of a Fractured Forearm"—Dr. Edgar Long, Oak City.

"A Reconsideration of the Anatomy of the Pyloric End of the Stomach as Regards Pyloric Ulcer"—Dr. G. H. Macon, Warrenton.

Materia Medica and Therapeutics.

Dr. W. L. Dunn, Chairman, Asheville,

OBSTETRICS.

Dr. K. G. Averitt, Chairman, Cedar Creek.

1. "The Proper Use of the Forceps in Obstetrics"—Dr. K. G. Averitt, Cedar Creek.

2. "The Relation of the Kidneys to the Causation of Eclampsia"—Dr. R. B. Hayes, Fayetteville.

3. "Practical Observations in Obstetrics"—Dr. H. D. Stewart, Monroe.

4. "Special Considerations in Surgical Obstetrics"—Dr. Roscoe D. McMillan, Red Springs.

5. "The Value of Pituitrin in Obstetrics"—Dr. Seavy Highsmith, Fayetteville.

6. "A Plea for More Rigid Asepsis in Obstetric Practice"—Dr. A. B. Croome, Maxton.

7. "Recollections of Obstetrical Cases"—Dr. W. H. Dixon, Ayden.

8. Unannounced—Dr. J. V. McGougan, Fayetteville.

9. Unannounced—Dr. L. B. Evans, Clarkton.

10. "Report of a Case of Concealed Hemorrhage"—Dr. A. S. Rose, Fayetteville.

Gynecology.

Dr. W. B. Murphy, Chairman, Snow Hill.

"The Relation of the Ductless Glands to Gynecology"—Dr. Robert B. Slocum, Wilmington.

"....."—Dr. J. T. J. Battle, Greensboro.

"Preventive Appendectomy"—Dr. H. S. Lott, Winston.

"The Treatment of Pelvic Infections"—Dr. K. C. Moore, Wilson.

"Full-Term Extra Uterine Pregnancy, with Report of Case"—Dr. Lyle S. Booker, Durham.

Medical Jurisprudence and State Medicine.

Dr. J. T. J. Battle, Chairman, Greensboro.

"State Medicine"—Dr. W. M. Jones, Greensboro.

(Some subject of State Medicine"—Dr. B. A. Hocutt, Clayton.

"Medical Jurisprudence"—Dr. W. P. Beall, Greensboro.

"Proper Handling of Medical Defectives by the Courts"—Dr. L. B. McBrayer, Montrose.

Surgery and Anatomy.

Dr. Chas. T. Harper, Chairman, (for surgery), Wilmington.

"Safety First"—Dr. Chas. T. Harper, Wilmington.

"Cases Illustrating Model Solution of Orthopedic Problems. (Moving picture and lantern slide demonstrations.)"—Dr. Michael Hoke, Atlanta, Ga.

"Human Plumbing-Amelioration and Cure of Chronic Intestinal Stasis"—Dr. Wm. Seaman Bainbridge, New York.

"Diaphragmatic Hernia with Report of

a Case"—Dr. Stuart McGuire, Richmond, Virginia.

"Diseases of the Umbilicus"—Dr. A. M. Shipley, Baltimore, Md.

"Surgical Indications in Neurasthenics"—Dr. G. F. Duncan, High Point.

"Ludwig's Angina"—Dr. J. T. Burruss, High Point.

"....."—Dr. Joseph Graham, Durham.

"....."—Dr. John Wesley Long, Greensboro.

"The Etiology of Sterility in Women"—Dr. F. Webb Griffith, Asheville.

"The Surgical Treatment of Asthma with a Report of Twelve Cases (with twelve cures)"—Dr. W. Perry Reaves, Greensboro.

"Rupture of Kidney with Report of a Case"—Dr. H. McKee Tucker, Raleigh.

"Diseases Due to Improper Reduction of Fractures and Dislocation of Nasal Bones"—Dr. M. R. Gibson, Raleigh.

"....."—Dr. Parran Jarboe, Greensboro.

"Esserine a Surgical Help"—Dr. P. R. MacFadgen, Concord.

"....."—Dr. Pane Crumpler, Clinton.

"....."—Dr. C. A. Woodward, Durham.

"Surgical Aspects of Auto-Toxemia"—Dr. T. M. West, Fayetteville.

"Cholecystitis as a Sequel to Typhoid Fever"—Dr. J. F. Highsmith, Fayetteville.

"Amœbic Abscess of Liver"—Dr. Wm. Allen, Charlotte.

"The Pathology of Goitre and Hyperthyroidism, (Illustrated)"—Dr. Addison Brenizer, Charlotte.

"The Use of Collargotris in the Diagnosis of Surgical Conditions with Report of an Interesting Case"—Dr. A. J. Crowell, Charlotte.

"....."—Dr. J. W. Squires, Charlotte.

"Atresia of the Vagina (Congenital Variety)"—Dr. J. A. Williams, Greensboro.

"....."—Dr. H. M. Bonner, New Bern.

"....."—Dr. C. M. Strong, Charlotte.

"....."—Dr. R, L. Gibbon, Charlotte.

"The Function of the Hospital"—Dr. C. D. Hill, Durham.

"Closure of the Incision in Tiers with Three Removable Cables"—Dr. E. T. Dickinson, Wilson.

"....."—Dr. B. R. Graham, Wallace.

"....."—Dr. L. N. Glenn, Gastonia.

Conjoint Session.

Wednesday, June 17, 12 o'clock.

Conjoint session of the Medical Society of the State of North Carolina and the North Carolina State Board of Health.

Members State Board of Health.

J. Howell Way, M.D., President, Waynesville.
Richard H. Lewis, M.D., Raleigh.
J. C. Ludlow, C.E., Winston-Salem.
W. O. Spencer, M.D., Winston-Salem.
Thomas E. Anderson, M.D., Statesville.
Chas. O'H. Laughinghouse, M.D., Greenville.
Edward J. Wood, M.D., Wilmington.
A. A. Kent, M.D., Lenoir.
Cyrus Thompson, M.D., Jacksonville.

Order of Business.

1. Reports of Work Accomplished and Recommendations:
   (a) W. S. Rankin, M.D., Secretary and Treasurer to Board.
   (b) ....., M.D., Chief. Bureau of Hookworm Disease.
   (c) C. A. Shore, M.D., Director State Laboratory Hygiene.
2. Discussions.
3. Election of Officers.
4. New Business.
   Adjournment.

Wednesday Night, 8:30 o'clock.

Report of the Committee on Obituaries.

Dr. E. G. Moore, Elm City.
Dr. A. W. Knox, Raleigh.
Dr. M. L. Stevens, Asheville.

Essay—"Conservation of Health."—Dr. A. S. Pendleton, Raleigh.

Oration—"Womanhood from the Physician's Viewpoint."—Dr. John R. Irwin, Charlotte.

Membership in the State Society.

All members of the component county societies shall be privileged to attend all meetings and take part in all the proceedings of the annual sessions, and shall be eligible to any office within the gift of the Society.

No person who has failed to pay his dues through the secretary of his county society shall be entitled to any rights or benefits of the Society. He has no right to read a paper, to hold office, to receive the printed transactions, to vote, or in any other way participate in the deliberations of the Society.

SEC. 3. No person who is under sentence of suspension or expulsion from any component society of this Society, or whose name has been dropped from its roll of members, shall be entitled to any of the rights

or benefits of this Society, nor shall he be permitted to take any part in any of its proceedings until such time as he has been relieved of such disability.

SEC. 4. Each member in attendance at the annual session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of his society, he shall receive a badge, which shall be evidence of his right to all the privileges of membership at the session.

Finances.

Pay your dues through your county secretary.

Make inquiry to see that your county society is in good standing and its assessment paid. You should see that you are not debarred from the scientific and business deliberations.

Chapter XI of the State Medical Association:*

*Assessments and Expenditures.**

SECTION 1. An assessment of two dollars per capita on the membership of the component societies is hereby made the annual dues of this Society, which amount shall be collected by the secretary of each county society from each of its members on or before the first day of March and forwarded to the treasurer of the State Society before the first day of April in each year.* The secretary of each county society shall forward a statement of its assessment, together with its roster of all officers and members, list of delegates and list of non-affiliated physicians of the county, to the secretary of this Society on or before the first day of April in each year.

SEC. 2. Any county society which fails to pay its assessment, or make the reports required, on or before the date above stated, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the State Society or of the House of Delegates, or receive the volume of Transactions, until such requirements have been met.

SEC. 3. All motions or resolutions appropriating money shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Council and House of Delegates on a call of the ayes and noes.

No reputable white physician can afford not to be a member of the State Medical Society. If you are not a member join at once.

Advantages to the Doctor of Membership in the State Society.

1. The annual Transactions of the State Medical Society affords the only permanent record of the profession in the State.

2. The doctor's posterity may suffer disappointment, knowing he was a doctor, if a search of the records gives no information concerning him.

3. A referee for a life insurance company of this State remarked recently that a doctor had lost nearly one hundred dollars in fees in one summer simply because he had failed to pay his Society dues, and as a result had his name omitted from the list of doctors for his county as published in the Transactions. The insurance companies in rating doctors count good standing in his county and State societies as 50 per cent.

4. To every member of the Society a copy of the annual Transactions is sent, thus giving him a record of the result of the study, research and experience of the other doctors of the State.

5. Social intercourse brings about a better understanding and fellowship.

A county secretary should not have to beg a member to pay his dues or send repeated requests for them.

Papers and Discussions.

SEC. 4. No address or paper before the Society, except those of the president, orator, and essayist, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject.

SEC. 5. All papers read before the Society shall be its property. Each paper shall be deposited with the secretary when read, and if this is not done, it shall not be published.

The papers should be typewritten on letter-size or legal-cap paper. Only one side of the paper should be used. The title of the paper, together with the name and address of the author, should be given on the first page. The other pages should be numbered at the top and carry the initials of the author.

"No voluntary paper shall be placed upon the annual program or be heard in the Association, which has not first been read in the county society of which the author is a member."

*Chapter XI was amended at the last annual meeting to provide:

1. That the fiscal year coincide with the calendar year in all parts of the organization.

2. That dues in county societias be made payable on January 1 of each year, and that membership drops automatically December 31 until dues are paid.

3. That county secretaries be required to report to the State Secretary all members in good standing, together with their per capita assessments for the current year not later than January 31.

SEC. 3. The chairmen of sections shall send in to the secretary, not later than thirty days previous to each meeting of the Society, the titles of papers to be presented by themselves and their assistants, to be used by the Committee on Scientific Work in making a program for the meeting.

SEC. 4. No paper shall be read before the Society unless the author be present, unless his absence be due to some unavoidable circumstance. A paper presented by proxy may be referred to the Committee on Publication.

SEC. 5. No paper shall be referred to the Committee on Publication until it has been placed in the hands of the secretary; and the secretary shall not return any paper accepted by the Society without the consent of the Society, and then he shall take a receipt for the same.

SEC. 6. No paper shall be received by or read before this Society that has been presented to any other society, excepting only a component society of this Society, or that has been offered for publication in any journal. In the case of any paper accepted, the author is supposed to have vested with the Society all rights to its ownership.

SEC. 7. No paper shall be published in the Transactions of this Society unless approved by the Committee on Publication; and any paper rejected by said committee shall be returned to the author through the secretary of the Society.

SEC. 8. It is to be understood that the Society is not to be considered as indorsing all the views and opinions advanced by the authors of papers published in the Transactions of the Society.

Election of Officers.

SECTION 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect: *Provided*, that when only one name is to be balloted for, the House may suspend the rules and declare the same elected by consent.

SEC. 2. The House of Delegates on the first day of the annual sessions, shall select a Committee on Nominations, consisting of ten delegates, no two of whom shall be from the same councilor district. It shall be the duty of this committee to consult with the members of the Society, and to hold one or more meetings, at which the best interests of the Society and of the profession of the State for the ensuing year shall be carefully considered. The committee shall report the result of its deliberations to the House of Delegates in the shape of a ticket containing the names of one member for the office of president and one member for each of the other offices to be filled at the annual session.

SEC. 3. The report of the nominating committee and the election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the general session.

SEC. 4. Nothing in this article shall be construed to prevent additional nominations being made by members of the House of Delegates.

SEC. 5. Any person known to have solicited votes for or sought any office within the gift of this Society shall be ineligible for any office for two years.

BOARD OF COUNCILORS

Dr. M. L. Stevens, President, Asheville.
Dr. K. P. B. Bonner, Secretary, Morehead City.

DISTRICTS

First—Dr. J. L. Spruill, Columbia.
Second—Dr. K. P. B. Bonner, Morehead City.
Third—Dr. G. L. Sikes, Salemburg.
Fourth—Dr. M. M. Saliba, Wilson.
Fifth—Dr. W. P. Holt, Duke.
Sixth—Dr. R. L. Felts, Durham.
Seventh—Dr. A. J. Crowell, Charlotte.
Eighth—Dr. R. O. Dees, Greensboro.
Ninth—Dr. D. J. Hill, Lexington.
Tenth—Dr. M. L. Stevens, Asheville.

THE COUNCIL

The council is composed of one councilor from each district. On the last day of the annual session of the Association it shall meet for reorganization and for outlining the work of the ensuing year, and at this meeting shall elect a president and secretary. Through its chairman it shall make an annual report to the House of Delegates. Each councilor shall make an annual report of his doings.

COUNCILOR DISTRICTS AND OFFICERS

First District

President .....
Secretary .....
Treasurer .....

Currituck, Camden, Pasquotank, Dare, Perquimans, Gates, Chowan, Washington, Tyrrell, Hyde.

Second District

President .....
Secretary .....
Treasurer .....

Hertford, Martin, Pitt, Bertie, Beaufort, Lenoir, Jones, Craven, Pamlico, Carteret.

NOTE.—The titles and names of authors of volunteered papers should be sent to chairman of the appropriate section.

NOTE.—If you have not already sent in your annual dues ($2) through your county secretary, do so at once. You should have paid in January.

Third District

President .....
Secretary .....
Treasurer .....

New Hanover, Pender, Onslow, Duplin, Bladen, Sampson, Columbus, Brunswick.

Fourth District

President .....
Secretary .....
Treasurer .....

Northampton, Halifax, Nash, Edgecombe, Johnston, Wilson, Wayne, Greene.

Fifth District

President .....
Secretary .....
Treasurer .....

Cumberland, Robeson, Scotland, Richmond, Montgomery, Moore, Harnett, Chatham.

Sixth District

President .....
Vice-President .....
Secretary .....
Treasurer .....

Wake, Franklin, Warren, Vance, Granville, Person, Caswell, Alamance, Orange, Durham.

Seventh District

President .....
Secretary .....
Treasurer .....

Anson, Union, Stanly, Mecklenurg, Cabarrus, Lincoln, Gaston, Cleveland, Rutherford.

Eighth District

President .....
Secretary .....
Treasurer .....

Rockingham, Guilford, Randolph, Forsyth, Stokes, Surry, Yadkin, Alleghany, Wilkes, Ashe.

Ninth District

President .....
Secretary .....
Treasurer .....

Davidson, Caldwell, Davie, Rowan, Iredell, Alexander, Catawba, Watauga, Mitchell, Burke.

Tenth District

President .....
Secretary .....
Treasurer .....

Buncombe, Yancey, McDowell, Madison, Henderson, Polk, Haywood, Transylvania, Jackson, Swain, Macon, Clay, Cherokee, Graham.

STATE SOCIETY DELEGATES

American Medical Association

Dr. J. Howell Way, Waynesville.
Dr. H. A. Royster, Raleigh.

Alternates:

Dr. W. L. Dunn, Asheville.
Dr. E. Reid Russell, Asheville.

South Carolina Medical Association

Dr. W. O. Nesbit, Charlotte.
Dr. C. Banks McNairy, Lenoir.
Dr. G. A. Garrison, Gastonia.
Dr. Sevay Highsmith, Fayetteville.
Dr. Tate Moore, Wilmington.
Dr. I. M. Taylor, Morganton.

Virginia Medical Association

Dr. B. K. Hayes, Oxford.
Dr. T. L. Ginn, Goldsboro.
Dr. J. W. McGehee, Reidsville.
Dr. H. T. Bahnson, Winston-Salem.
Dr. D. A. Stanton, High Point.

Association of Medical Colleges

Dr. H. A. Royster, Raleigh.

COMMITTEES

Scientific Work

Dr. H. A. Royster, Raleigh.
Dr. H. Haywood, Jr., Raleigh.
Dr. J. A. Ferrell, Raleigh (ex officio chairman.)

Public Policy and Legislation

Dr. Albert Anderson, Raleigh.
Dr. L. B. McBrayer, Aberdeen.
Dr. G. G. Thomas, Wilmington.
Dr. Jas. M. Parrott, Kinston (ex officio).
Dr. J. A. Ferrell, Raleigh (ex officio).

Publication

Dr. E. C. Register, Charlotte.
Dr. J. Howell Way, Waynesville.
Dr. J. A. Ferrell, Raleigh (ex officio).

Finance

Dr. D. A. Stanton, High Point.
Dr. Oscar McMullen, Elizabeth City.
Dr. C. A. Abernethy, Raleigh.

Obituaries

Dr. E. G. Moore, Elm City.
Dr. A. W. Knox, Raleigh.
Dr. M. L. Stevens, Asheville.

Arrangements

Dr. Albert Anderson, Raleigh, Chairman.
Dr. J. R. Rogers, Wake County Medical Society.
Dr. Clarence E. Judd, Wake Co. Med. Soc.
Dr. R. S. McGeachy, Wake Co. Med. Soc.
Dr. W. W. Stancell, Wake Co. Med. Soc.
Dr. R. S. Stevens, Wake Co. Med. Soc.
Dr. A. C. Campbell, Wake Co. Med. Soc.
Dr. H. Haywood, Jr., Wake Co. Med. Soc.

To Consider Dr. Saliba's Report and Suggestions

Dr. M. M. Saliba, Wilson.
Dr. A. J. Crowell, Charlotte.
Dr. Jno. A. Ferrell, Raleigh.

Records of the Society

Dr. Jno. A. Ferrell, Raleigh.
Dr. I. H. Manning, Chapel Hill.
Dr. J. Howell Way, Waynesville.

Medical Defense

Dr. Jas. M. Parrott, Kinston.

Dr. M. H. Fletcher, Asheville.
Dr. W. S. Rankin, Raleigh.
Dr. G. W. Pressly, Charlotte.
Dr. H. A. Royster, Raleigh.

History of Society Members

Dr. Jno. A. Ferrell, Raleigh.
Dr. E. G. Moore, Elm City.
Dr. A. W. Knox, Raleigh.
Dr. M. L. Stevens, Asheville.
Dr. D. J. Hill, Lexington.
Dr. A. J. Crowell, Charlotte.
Dr. Oscar McMullen, Elizabeth City.

Constitution and By-Laws

Dr. A. A. Kent, Lenoir.
Dr. G. T. Sikes, Grissom.
Dr. F. H. Holmes, Clinton.

**Medical Education*

Dr. W. T. Carstarphen, Wake Forest.
Dr. G. W. Pressly, Charlotte.
Dr. W. B. MacNider, Chapel Hill.
Dr. J. M. Parrott, Kinston (ex officio).
Dr. J. A. Ferrell, Raleigh (ex officio).

BOARD OF MEDICAL EXAMINERS

MEETING, RALEIGH, JUNE 9, 1914

Dr. John Bynum, President, Winston-Salem.

Dr. Benj. K. Hays, Secretary-Treasurer, Oxford.

Surgery—Dr. J. C. Rodman, Washington.

Gynecology and Obstetrics—Dr. L. B. McBrayer, Aberdeen.

Anatomy, Pathology, Histology, and Bacteriology—Dr. W. W. McKenzie, Salisbury.

Practice of Medicine—Dr. H. H. Dodson, Greensoro.

Materia Medica and Therapeutics—Dr. John Bynum, Winston-Salem.

Chemistry and Diseases of Children—Dr. J. L. Nicholson, Richland.

Physiology and Hygiene—Dr. Benj. K. Hays, Oxford.

The Board of Medical Examiners is composed of seven members, elected on the second day in the general meeting, for a term of six years. The next election will be held Wednesday during the 1914 meeting. The Board holds examinations beginning Tuesday of the week preceding the date of the annual meeting of the Society. For 1914 the meeting will be in Raleigh, beginning June 9th.

QUESTION FOR THE DOCTORS

Has any physician ever enjoyed a Statewide reputation as a professional man who did not take an interest in and attend the meetings of the State Society?

As a practical proposition, will you lose or gain practice if your patrons know your absence is for the purpose of attending scientific discussions of medical topics?

Is there anything you might learn from other doctors of experience which might increase your efficiency?

Think the matter over. Attend the meeting.

HOUSE OF DELEGATES

FIRST MEETING, TUESDAY, JUNE 16, 2 P. M.
AUDITORIUM

Officers

Dr. Jas. M. Parrott, President, Kinston.
Dr. Jno. A. Ferrell, Secretary, Raleigh.

The legislative and business body of the Society is composed of the officers of the Society and the delegates. The officers are the president, the three vice presidents, the secretary, the treasurer, and the ten councilors. Each county society which has paid its dues is entitled to one delegate. The large county societies are entitled to one delegate for every twenty-five members in good standing or major fraction thereof. That is, thirty-eight paid members entitles a society to two delegates, and sixty-three members to three delegates. An alternate for each delegate should be elected to serve in the event the delegate elected is absent. *No delegate can be seated who has not remitted his dues through the secretary of his county society.* The term of office for delegates is two years. No delegate is eligible to the office of president, vice president, secretary, or treasurer.

Sec. 14. The House of Delegates shall present a summary of its proceedings to the last general meeting of each annual session, and shall publish the same in the Transactions.

ORDER OF BUSINESS

1. Call to order by the president.
2. Roll call and seating of qualified delegates.
3. Reading of minutes of previous meeting.
4. Reports of officers:
   (a) Secretary.
   (b) Treasurer.
   (c) Chairman Board of Councilors.
5. Report of Standing Committees:
   (a) Arrangements.
   (b) Public Policy and Legislation.
   (c) Publication.
   (d) Scientific Work.
   (e) Finance.
   (f) Obituaries and Memorial Exercises.
   (g) Medical Defense.
   (h) Collection and Preservation of Records.
6. Report of Special Committees:
   Constitution and By-Laws, Dr. A. A. Kent, Chairman.
7. Reading of Communications.
8. Reading of Memorials and Resolutions.

9. Unfinished Business.
10. New Business.
11. Election of Nominating Committee. (One from each Councilor District. The committee to nominate the officers and councilors must be named first day.)

COUNTY DELEGATES TO 1914 STATE MEETING

First Regular Meeting Tuesday, 2 p. m.
Second Regular Meeting, Thursday, 9 a. m

Alamance:
Alexander (see Iredell):
Alleghany:
Anson:
Ashe:
Avery:
Beaufort:
Bertie:
Bladen:
Brunswick:
Buncombe:
Burke:
Delegate, Dr. John McCampbell, Morganton.
Alternate, Dr. I. M. Taylor, Morganton.
Cabarrus:
Caldwell:
Camden (see Pasquotank):
Cartaret:
Caswell:
Catawba:
Cherokee:
Delegate, Dr. J. N. Hill, Murphy.
Alternate, Dr. W. C. Morrow, Andrews.
Chatham:
Clay (see Macon):
Cleveland:
Columbus:
Craven:
Cumberland-Hoke:
Delegate, Dr. J. F. Highsmith, Fayetteville.
Alternate, Dr. J. S. Cochran, Fayetteville.
Currituck:
Dare (see Pasquotank):
Davidson:
Delegate, Dr. D. J. Hill, Lexington.
Davie:
Duplin:
Delegate, Dr. J. W. Carroll, Wallace.
Alternate, Dr. R. L. Carr, Rose Hill.
Durham:
Delegate, Dr. C. A. Woodard, Durham.
Alternate, Dr. L. S. Booker, Durham.
Edgecombe:
Forsyth:
Franklin:
Gaston:
Delegate, Dr. T. C. Quickel, Gastonia.
Alternate, Dr. J. M. Sloan, Gastonia.
Gates:
Graham:
Granville:
Greene:
Guilford:
Delegate, Dr. W. F. Ball, Greensboro.
Delegate, Dr. J. W. Long, Greensboro.
Delegate, Dr. E. Harrison, Greensboro.
Halifax:
Harnett:
Haywood:
Henderson-Polk:
Delegate, Dr. Guy E. Dixon, Hendersonville.
Hertford:
Hoke (see Cumberland):
Hyde:
Iredell-Alexander:
Delegate, Dr. M. R. Adams, Statesville.
Jackson:
Johnston:
Jones:
Lee:
Lenoir:
Delegate, Dr. A. D. Parrott, Kinston.
Alternate, Dr. T. A. Whitaker, Kinston.
Lincoln:
Delegate, Dr. C. D. Thompson, Lincolnton.
Madison:
Macon-Clay:
Delegate, Dr. M. E. Lapham, Highlands.
Alternate, Dr. S. H. Lyle, Franklin.
Martin:
McDowell:
Delegate, Dr. B. L. Ashworth, Marion.
Alternate, Dr. J. B. Johnson, Old Fort.
Mecklenburg:
Delegate, Dr. J. P. Munroe, Charlotte.
Delegate, Dr. R. L. Gibbon, Charlotte.
Delegate, Dr. S. W. Hovis, Charlotte.
Mitchell:
Delegate, Dr. C. A. Peterson, Spruce Pine
Montgomery:
Delegate, Dr. C. Daligny, Troy.
Alternate, Dr. A. F. Thompson, Troy.
Moore:
Nash:
Delegate, Dr. E. B. Quillen, Rocky Mount
New Hanover:
Delegate, Dr. C. P. Bowles, Wilmington.
Alternate, Dr. J. C. Wessell, Wilmington.
Northampton:
Onslow:
Orange:
Pamlico:
Pasquotank-Camden-Dare:
Perquimans-Chowan:
Delegate, Dr. H. M. S. Cason, Edenton.
Alternate, Dr. J. W. Warren, Edenton.
Pender:
Person:
Pitt:
Alternate, Dr. J. W. Warren, Edenton.

Polk:
Randolph:
Delegate, Dr. C. A. Hayworth, Coleridge.
Alternate, Dr. C. E. Wilkerson, Randleman.
Richmond:
Robeson:
Delegate, Dr. R. D. McMillan, Red Springs.
Alternate, Dr. T. L. Johnson, Lumberton.
Rockingham:
Rowan:
Rutherford:
Delegate, Dr. M. H. Biggs, Rutherfordton.
Alternate, Dr. Henry Norris, Rutherfordton.
Sampson:
Scotland:
Stanly:
Stokes:
Surry:
Delegate, Dr. R. E. L. Flippin, Pilot Mountain.
Alternate, Dr. J. W. Ring, Elkin.
Swain:
Transylvania:
Delegate, Dr. W. J. Wallis, Brevard.
Alternate, Dr. H. E. Lyday, Brevard.
Tyrrell (see Washington):
Union:
Delegate, Dr. H. D. Stewart, Monroe.
Alternate, Dr. R. Armfield, Marshville.
Vance:
Wake:
Warren:
Washington-Tyrrell:
Delegate, Dr. B. F. Halsey, Roper.
Alternate, Dr. C. A. Flowers, Columbia.
Watauga:
Wayne:
Wilkes:
Delegate, Dr. M. L. Townsend, North Wilkesboro.
Alternate, Dr. J. M. Turner, North Wilkesboro.
Wilson:
Delegate, Dr. W. H. Anderson, Wilson.
Alternate, Dr. A. F. Williams, Wilson.
Yadkin:
Yancey:

Work of Committee on Nominations

1. President.
2. First Vice President.
3. Second Vice President.
4. Third Vice President.
5. Ten Councilors (one for each district).
6. Orator.
7. Essayist.
8. Leader in Debate.
9. Committee on Scientific Work (three; two besides State Secretary.)
10. Committee on Public Policy and Legislation (three members and the President and Secretary).
11. Publication (three; two besides State Secretary).
12. Obituaries (three).
13. Finance (three).
14. Chairman of Committee on Arrangements.
15. Delegate to A. M. A. (one) Virginia Medical Society (two) South Carolina Medical Society.
16. Fix time and place of meeting.

Two members of State Board of Medical Examiners for Nurses will be elected in 1915 to serve for three years. The present representatives of the Society are Dr. A. B. Croom, Maxton; and Dr. J. W. Neal, Monroe. The Board is composed of five members, three of whom are nurses elected by the Nurses' Association.

OFFICERS OF COUNTY MEDICAL SOCIETIES FOR 1914

Alamance:
President .....
Secretary .....
Alexander (see Iredell):
Alleghany:
President .....
Secretary .....
Anson:
President, Dr. E. S. Ashe, Wadesboro.
Secretary, Dr. J. M. Covington, Jr., Wadesboro.
Ashe:
President .....
Secretary .....
Avery:
President .....
Secretary, Dr. Mary M. Sloop.
Beaufort:
President, Dr. H. W. Carter, Washington.
Secretary, Dr. J. C. Rodman, Washington.
Bertie:
President, Dr. P. C. Jenkins, Roxobel.
Secretary, Dr. J. L. Pritchard, Windsor.
Bladen:
President, Dr. G. L. Clark, Clarkton.
Secretary, Dr. N. P. Liles, Elizabethtown.
Brunswick:
President .....
Secretary .....
Buncombe:
President, Dr. P. H. Ringer, Asheville.
Secretary, Dr. G. S. Tennent, Asheville.

Burke:
President, Dr. J. B. Riddle, Morganton.
Secretary, Dr. Jas. W. Vernon, Morganton.
Cabarrus:
President .....
Secretary .....
Caldwell:
President, Dr. A. A. Kent, Lenoir.
Secretary, Dr. C. B. McNairy, Lenoir.
Camden (see Pasquotank).
Cartaret:
President, Dr. C. L. Duncan, Beaufort.
Secretary, Dr. W. E. Headen, Morehead City.
Caswell:
President .....
Secretary .....
Catawba:
President .....
Secretary .....
Chatham:
President .....
Secretary, Dr. H. T. Chapin, Chatham.
Cherokee:
President, Dr. N. B. Adams, Murphy.
Secretary, Dr. S. C. Highway, Murphy.
Chowan-Perquimans:
President, Dr. J. H. McMullen, Edenton.
Secretary, Dr. H. M. S. Cason, Edenton.
Clay (see Macon):
Cleveland:
President, Dr. T. G. Hamrick, Shelby.
Secretary, Dr. W. F. Mitchell, Shelby.
Columbus:
President, Dr. J. M. Northington, Boardman.
Secretary, Dr. W. F. Smith, Chadbourn.
Craven:
President .....
Secretary .....
Cumberland-Hoke:
President, Dr. Wm. S. Jordan, Fayetteville.
Secretary, Dr. R. L. Pittman, Fayetteville.
Currituck:
President, Dr. W. T. Griggs, Poplar Branch.
Secretary .....
Dare (see Pasquotank):
Davidson:
President, Dr. C. A. Julian, Thomasville.
Secretary, Dr. Marvin Bowers, Thomasville.
Davie:
President .....
Secretary .....
Duplin:
President, Dr. John M. Faison, Faison.
Secretary, Dr. B. R. Graham, Wallace.
Durham:
President, Dr. N. P. Boddie, Durham.
Secretary, Dr. Foy Roberson, Durham.
Edgecombe:
President .....
Secretary .....
Forsyth:
President .....
Secretary .....
Franklin:
President, Dr. R. F. Yarbrough, Louisburg.
Secretary, Dr. H. A. Newell, Louisburg.
Gaston:
President, Dr. H. F. Glenn, Gastonia.
Secretary, Dr. Bess V. Puett, Dallas.
Gates:
President .....
Secretary .....
Graham:
President .....
Secretary .....
Granville:
President, Dr. T. L. Booth, Oxford.
Secretary, Dr. G. T. Sikes, Grissom.
Greene:
President .....
Secretary .....
Guilford:
President .....
Secretary, Dr. Parran Jarboe, Greensboro.
Halifax:
President, Dr. J. A. Collins, Enfield.
Secretary, Dr. A. S. Harrison, Enfield.
Harnett:
President, Dr. W. L. Hudson, Dunn.
Secretary, Dr. L. J. Arnold, Lillington.
Haywood:
President, Dr. J. E. Wilson, Canton.
Secretary, Dr. J. Howell Way, Waynesville.
Henderson-Polk:
President, Dr. W. R. Kirk, Hendersonville.
Secretary, Dr. Guy E. Dixon, Hendersonville.
Hertford:
President, Dr. T. I. Burbago, Como.
Secretary, Dr. C. F. Griffin, Winton.
Hyde:
President .....
Secretary .....
Iredell-Alexander: ....
President, Dr. F. A. Carpenter, Statesville.
Secretary, Dr. J. E. McLaughlin, Statesville.

Jackson:
President, Dr. A. A. Nichols, Sylva.
Secretary, Dr. A. S. Nichols, Sylva.
Johnston:
President, Dr. E. Hooks, Smithfield.
Secretary, Dr. L. D. Wharton, Smithfield.
Jones (no society):
Lee:
President .....
Secretary .....
Lenoir:
President, Dr. F. A. Whitaker, Kinston.
Secretary, Dr. A. D. Parrott, Kinston.
Lincoln:
President, Dr. F. W. Saine, Lincolnton.
Secretary, Dr. John B. Wright, Lincolnton.
Macon-Clay:
President, Dr. S. H. Lyle, Franklin.
Secretary, Dr. W. A. Rogers, Franklin.
Madison:
President, Dr. S. B. Woody, Spring Creek.
Secretary, Dr. Oscar O. Miller, Stackhouse.
Martin:
President, Dr. J. B. H. Knight, Williamston.
Secretary, Dr. Wm. E. Warren, Williamston.
McDowell:
President, Dr. W. F. Morphew, Marion.
Secretary, Dr. J. F. Jonas, Marion.
Mecklenburg:
President, Dr. C. E. Walker, Charlotte.
Secretary, Dr. Otho B. Ross, Charlotte.
Mitchell:
President, Dr. C. A. Peterson, Spruce Pine.
Secretary, Dr. R. E. Stack, Bakersville.
Montgomery:
President, Dr. A. F. Thompson, Troy.
Secretary, Dr. C. Daligny, Troy.
Moore:
President .....
Secretary, Dr. J. H. Matthews, Vass.
Nash:
President, Dr. J. P. Battle, Nashville.
Secretary, Dr. Jno. L. Lane, Rocky Mount.
New Hanover:
President, Dr. C. T. Harper, Wilmington.
Secretary, Dr. E. S. Bullock, Wilmington.
Northampton:
President, Dr. J. L. Lister, Jackson.
Secretary, Dr. P. C. Brittle, Conway.
Onslow:
President, Dr. D. W. Bullock, Wilmington (deceased).
Secretary, Dr. Cyrus Thompson, Jacksonville.
Orange:
President .....
Secretary .....
Pamlico:
President, Dr. G. S. Attmore, Stonewall.
Secretary, Dr. W. F. Griff, Lawndale.
Pasquotank-Camden-Dare:
President .....
Secretary, Dr. C. W. Sawyer, Elizabeth City.
Pender:
President .....
Secretary .....
Perquimans (see Chowan):
President .....
Secretary .....
Person:
President, Dr. R. S. Baynes, Hurdle Mills, R. F. D.
Secretary, Dr. A. F. Nicholls, Roxboro.
Pitt:
President .....
Secretary .....
Polk (see Henderson):
Randolph:
President, Dr. W. I. Sumner, Randleman.
Secretary, Dr. W. J. Moore, Asheboro.
Richmond:
President .....
Secretary, Dr. W. C. Terry, Hamlet.
Robeson:
President, Dr. J. L. McMillan, Red Springs.
Secretary, Dr. H. H. Hodgin, Red Springs.
Rockingham:
President .....
Secretary .....
Rowan:
President, Dr. R. V. Brawley, Salisbury.
Secretary, Dr. E. W. Currie, Salisbury.
Rutherford:
President, Dr. J. B. Thompson, Bostic.
Secretary, Dr. W. C. Bostic, Forest City.
Sampson:
President, Dr. O. W. Underwood, Roseboro.
Secretary, Dr. G. M. Cooper, Clinton.
Scotland:
President, Dr. G. D. Everington, Laurinburg.
Secretary, Dr. Peter McLean, Laurinburg.
Stanly:
President .....
Secretary .....
Stokes:
President .....

Secretary .....

Surry:
President, Dr. J. W. Ring, Elkin.
Secretary, Dr. E. M. Hollingsworth, Mount Airy.

Swain:
President .....
Secretary .....

Transylvania:
President, Dr. C. W. Hunt, Brevard.
Secretary, Dr. E. S. English, Brevard.

Tyrrell (see Washington):

Union:
President, Dr. R. L. Payne, Monroe.
Secretary, Dr. H. D. Stewart, Monroe.

Vance:
President .....
Secretary, Dr. L. C. McIntosh.

Wake:
President, Dr. J. A. Strickland, Zebulon.
Secretary, Dr. W. C. Horton, Raleigh.

Warren:
President, Dr. P. J. Macon, Warrenton.
Secretary, Dr. C. H. Peete, Warrenton.

Washington-Tyrrell:
President, Dr. W. H. Hardison, Creswell.
Secretary, Dr. W. H. Ward, Plymouth.

Watauga:
President .....
Secretary .....

Wayne:
President .....
Secretary, Dr. I. L. Ginn, Goldsboro.

Wilkes:
President, Dr. W. P. Horton, North Wilkesboro.
Secretary, Dr. C. S. Sink, North Wilkesboro.

Wilson:
President, Dr. A. F. Williams, Wilson.
Secretary, Dr. M. M. Saliba, Wilson.

Yadkin:
President, Dr. T. R. Harding, Yadkinville.
Secretary, Dr. S. A. Harding, Courtney.

Yancey (no society).

HOTEL RATES ON EUROPEAN PLAN

Wright's Hotel and Cafe

Single room without bath: One person, $1.00; two persons, $1.50.

Single room with private bath: One person, $1.50 and $2.00; two persons, $2.50 and $3.00. Public baths on each floor, which guests are permitted to use without extra charge.

The Yarborough

Rooms without bath, $1.00 to $1.50 per person.

Rooms with bath, $1.50 to $3.00 per person.

The Bland

$1.00 to $2.00 per person per day for room only. $1.00 rate is for two or more in one room.

Hotel Giersch

Rooms with private bath, $1.25. Rooms without bath, but with privilege to same $1.00 per day.

Editorial News Items.

The State Board of Examiners for Nurses of North Carolina held its annual session at the Hotel "Malbourne," Durham, N. C., May 25, 1914.

The Asheville, N. C., Board of Health pays Dr. L. B. McBrayer, who recently resigned to accept the medical directorship of the State Sanitarium for Tuberculosis at Montrose, N. C., a very fine tribute in devoting the whole of the May issue of its monthly public health bulletin to an account of the banquet tendered Dr. McBrayer last month when leaving Asheville for the taking up of his new duties. The issue contains his portrait and a detailed account of the speeches at the banquet with Dr. McBrayer's felicitous and touching response. It was an issue worthy of the subject as well as of the splendid public health department of Asheville.

Shaw University Medical School (Leonard Medical College) of Raleigh, N. C., held its commencement May 13, graduating a class of eight negro doctors of medicine and two graduates in pharmacy. Announcement was also made that beginning with the next session the university would only give the first two years of the medical course, thus ceasing to confer medical degrees.

The recent session of the Directors of the State Hospital for Insane at Columbia, S. C., elected Dr. A. B. Patterson of Barnwell, S. C., physician in charge of the State Park branch of the State Insane Hospital and he at once assumed the duties of the position.

An effort is being made in Charlotte, N.C., to secure the establishment of a large general hospital open to the entire public.

"Clean-up days" were never so much in evidence throughout the whole South as is noted this year. More and more the masses of the people are growing more concerned about sanitary problems and disease pre-

vention. Verily the South continues to come into her own.

The closing exercises of the Nurses Training School of the Highsmith Hospital of Fayetteville, N. C., took place in that city on the evening of May 1st. The address was delivered by Dr. Benj. K. Hays, of Oxford, N. C., secretary of the State Board of Medical Examiners for physicians.

The closing exercises of the Nurses Training School of the Presbyterian Hospital of Charlotte, N. C., were held in Charlotte on the evening of May 5, 1914. Dr. John R. Irwin delivered the diplomas.

The formal opening at Rocky Mount, N. C., on June 1, 1914, of Parkview Hospital is announced. It is intended to care for all medical and surgical patients, excluding only contagious diseases. The official staff is composed of Drs. J. P. Whitehead, J. P. Battle, R. H. Speight, Jr., E. B. Quillen, and J. P. Speight, all of Rocky Mount, N. C. Drs. Geo. Ben. Johnson and A. Murat Willis, of Richmond, Va., are also announced as consulting surgeons. Dr. E. S. Boice, late of Richmond, will be house physician.

The regular meeting of the Fourth District North Carolina Medical Society was held in Smithfield, N. C., May 12, under the presidency of Dr. E. G. Moore, of Elm City, Dr. M. M. Saliba, of Wilson, N C., secretary. The session was well attended and a number of excellent papers presented.

While fording a swollen river a few miles below Taylorsville, N. C., Dr. A. M. Edwards of that place narrowly escaped drowning. He suffered the loss of his professional case while his horse, an adept swimmer, swam to the opposite bank with the doctor clinging to the floating buggy.

The Sixth District North Carolina Medical Society held its annual meeting at the Watts Hospital in Durham, N. C., under the presidency of Dr. C. G. Nichols, of Roxboro, on April 23 with a full attendance. The President of the State Society, Dr. J. M. Parrott, of Kinston, was present and delivered an address on "The Doctor's Duty to his Fellow Doctor." Papers were also presented by Drs. Albert Anderson, of Raleigh, James Bullitt, of Chapel Hill, T. C. Kerns and Joseph Graham, of Durham, H. H. Bass, of Henderson, J. M. Manning, of Durham, P. R. Hardee, of Stem, and others. Dinner was served at the Country Club.

On account of widespread opposition from the numerous tourist hotels at Asheville, N. C., it is announced that the plans for the erection on Mt. Pleasant near that city of a $250,000 sanatorium for tuberculosis have been abandoned at the urgent request of many citizens who believed its construction would damage the city as a tourist resort.

The Carolina doctor of medicine is an alert active man, engaging in every line of thought and accomplishment, having in view the improvement of mankind, the bettering of the race, the developing of the social life of humanity, or any other movement that interests or attracts his fellows, enlists always the cordial support of physicians as was tritely illustrated at the recent national gathering of the Ancient and Accepted Order of Nobles of the Mystic Shrine last month in Atlanta, Ga., where there were more than fifty Carolina Aesculapians who took part in the labors and the festivities ot the notable occasion. Dr. Chase P. Ambler, of Asheville, N. C., is Illustrious Potentate for 1914 of Oasis Temple of Charlotte, N. C., the home of the North Carolina fraters of this great order.

Dr. J. B. Elliott, of Fort Mill, S. C., has been appointed president of the City Board of Health.

Dr. R. B. Wilkins, late of Duke, N. C., has removed to Raeford, N. C., where he will practice.

Dr. W. S. Stevenson, Mooresville, N. C., a leading physician and citizen was stricken with apoplexy May 2nd, and is reported seriously ill.

Dr. H. M. Eddleman, of Gastonia, N. C., is spending some time in attendance on the clinics of Baltimore and New York.

Drs. J. W. McNeil and J. Vance McGougan, both well known physicians of Fayetteville, N. C., are active members of the executive committee of the Scottish Society of America which held its annual session in Fayetteville, N. C., May 28, 1914, under the presidency of Dr. J. A. McDonald, editor of the Torronto Globe, Torronto, Canada.

Dr. P. W. Covington, formerly of Rockingham, N. C., now of Raleigh, is canvassing the State in the interest of securing an efficient registration of births and deaths on

(*Continued on page 409*)

BOOK NOTICES.

Modern Surgery: General and Operative. By J. Chalmers DaCosta, M.D., and Samuel D. Gross, Professor of Surgery, Jefferson Medical College, Philadelphia, Pa. Seventh Edition, Revised, Enlarged and Reset. Octavo of 1515 pages, with 1085 illustrations, some of them in colors. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $6.00 net; Half Morocco, $7.50 net.

This is a very remarkable volume written by a very remarkable surgeon, and we have looked over it with a great deal of interest. The illustrations are certainly very appropriate and very instructive. The reviewer knows of no volume of this size that has as many illustrations as this.

The author's preface is quite unusual. It is unlike any that you see in other volumes and therefore we take pleasure in freely quoting from it:

"A man who has worked long and earnestly in the completion of a book has upon him a sense of disenchantment and has within him a host of misgivings. Hope is seldom a constant companion of the solitary worker. No one can be more conscious than the author that there are defects in this book. I have done my best to correct them and have corrected many of them, but others are uncorrectable without writing an entirely new book.

"In the making of this, as of previous editions, I have again and again been in profound perplexity as to whether an alleged discovery is a fragment of eternal truth or a nebulous emanation of chaos. To make many mistakes of judgment in regard to such matters would mean a book rich in misinformation. If all of the alleged improvements of recent years were gathered together, the company would be decidedly mixed, and one would have to be cautious in receiving and in making introductions. In that company we would find the productions of the mistaken enthusiast, of the brilliant confidence man, of the deluded observer, of the conscientious worker, of the dull pretender, of the man with occasional flashes of genius, of the profound scholar, and of the grandee of science.

"In a book like this the author is held by a short tether. He must strive to attain a happy medium between undue length and undue brevity. The former tends to become prolixity, the latter a Gradgrind catalogue of undigested and unexplained facts. Almost every very long book, like almost every very long congressional speech, contains many words which tell little. Too brief a book is like Mrs. General's mind, free from opinions. She had 'a little circular set of mental grooves or rails on which she started little trains of other people's opinions, which never overtook one another and never got anywhere.' Many times I have set forth opinions, but as want of space has forbidden argument and discussion, the imperative mood has dominated the text, and many of the views must appear dogmatic and oracular.

"I have tried to keep out of these pages the ornaments of plagiarism. I have sought to do so by giving the authority for every important statement. When possible I have used the author's works, believing that his description of his own work must be better than any description that could be written for him. In consequence, the book contains numerous quotations. As I must use other men's work, it is only fair that I should acknowledge it. The vital necessity for using the work of others is emphasized in Mr. Story's lines, which are printed on page 7."

The publishers are to be congratulated on having the privilege of publishing such a valuable book. Their work has been most excellently performed. The index which is usually perfected by the publishers is very accurate and complete.

Psychanalysis: Its Theories and Practical Application. By A. A. Brill, Ph.B., M.D., Chief of Clinic of Psychiatry and Clinical Assistant in Neurology, Columbia University Medical School; Chief of the Neurological Department of the Bronx Hospital and Dispensary. Second edition, thoroughly revised. Octavo of 393 pages. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $3.00 net.

In this second edition new matter has been added by way of new illustrative material of a practical and instructive character, by the insertion of analyzed dreams, interesting cases, and two new chapters. In addition the book has been thoroughly revised and greatly enlarged by many supplements. The new material comprises mainly discussions on artificial dreams, the unconscious factors in neuroses, collecting manias, pathologic homosexuality, and fairy tales as a determinant of dreams and neurotic symptoms. A glossary of psychanalytic and psychosexual terms has also been added.

The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume III. Number II. Octavo of 213 pages, 55 illustrations. Philadelphia and London: W. B. Sounders Company, 1914. Published Bi-Monthly. Price per year: Paper, $8.00. Cloth, $12.00.

The table of contents for this volume is very interesting indeed and is as follows: Murphy's Clinical Talks on Surgical and General Diagnosis; The Examination and Analysis of Cases; Empyema; Abderhalden Test in Tubal Pregnancy; Three Cases of Ectopia Testis; Cholelithiasis; Pericholecystitis; Stones in Cystic Duct; Cholecystectomy; Acute Pancreatic Cyst; Duodenal Ulcer; Extensive Adhesions; Dilated Stomach; Gastro-Enterostomy; Description of Dr. Murphy's Button Operation; Goiter, A Talk on the Embryology, Anatomy, and Physiology of the Thyroid; Tuberculosis of Kidney. Nephrectomy; Vesical Papillomata; Amputation Neuroma with Ascending Neuritis; Division of Right Half of Cauda; Neuroma of the Ulnar Nerve, Result of Cicatricial Compression Following Unrecognized Fracture; Internal Hemorrhoids with Severe Bleeding at Stool, the Result of a Small Slit in a Hemorrhoidal Vein.

Genito-Urinary Surgery: Surgical Diseases and Injuries of the Genito-Urinary Organs. With 27 color and 21 black-and-white plates and 279 illustrations in the text. 790 pages. Price $7.00. Funk & Wagnalls Company, Publishers, New York.

This book is unusually well balanced, each part being in well-proportioned relation. The fine illustrations do much toward illuminating the text and bringing out the successive steps in operative procedures in cystoscopic examinations and in the use of the radiograph. They are, with very few exceptions, from cases that have been under the author's care, or from specimens that have been removed by operation. We have given us in this volume an account of the diseases and injuries of the urinary system, and of the male genital system which will prove of great value to members of the profession engaged in general practice, and will also be of assistance to those beginning a surgical career.

Transactions of the American Pediatric Society. Twenty-fifth Session. Held at the New Willard Hotel, Washington, D. C., May 5, 6, and 7, 1913. Edited by Linnoeus Edford Le Fetra, M.D. Volume XXV.

This volume of the Transactions is gotten up in quite an attractive style and does credit to the editor. The papers and the illustrations are very interesting.

A System of Surgery. Edited by C. C. Choyce, B.Sc., M.D., F.R.C.S., and J. Martin Beattie, M.A., M.D., C.M. Three large, octavo volumes, profusely illustrated with hundreds of half-tones and line drawings, and many colored plates. Bound in Interlaken Book Cloth. $7.00 per volume; $21.00 per set. Funk & Wagnalls Company, 354-360 Fourth Avenue, New York.

This work is designed primarily for the general practitioner, and unlike other works which give full description of the surgical operations, the authors here indicate the lines of operative procedure, and the space generally devoted to the description of operations is used in this work for pathological, symptomatological, and diagnostic data relating to surgical conditions and diseases of the various organs and regions, and their treatment. The whole volume is profusely illustrated with beautiful and costly colored plates, half-tones, etc. We heartily recommend the book to every physician.

Clinical Hematology: An Introduction to the Clinical Study of the So-Called Blood Diseases and of Allied Disorders. By Gordon R. Ward, M.D., Fellow of the Royal Society of Medicine, Medical Society of London, etc. Octavo of 394 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $3.50 net.

This volume is primarily concerned with that clinical study of the so-called blood diseases which has been so much overshadowed by exclusively pathological investigation. It is secondarily concerned with the classification of blood diseases, inasmuch as this is a necessary preliminary to any understanding of their nature. The work is quite up-to-date in every way.

Old Age Deferred. The Causes of Old Age and Its Postponement by Hygienic and Therapeutic Measures. By Arnold Lorand, M.D., Carlsbad, Austria. Fourth Edition. Translated, with additions, by the author from the Third German Edition. Philadelphia, Pa.: F. A. Davis Company, Publishers, 1914.

While it is still impossible for us to create a young man out of an old one, it is quite within the bounds of possibility, as the author of this volume demonstrates, to prolong our term of youthfulness by ten or twenty years. In other words we need no longer grow old at forty or fifty, but may live to the age of ninety or longer, instead of dying at sixty or seventy. All this can be brought about by the observance of certain hygienic measures, and by improving the functions of a certain few of the glandular structures in our body, provided incurable organic disorders have not already too gravely compromised one or more of our main organs.

The author has described with great care the intimate physical and psychical condi-

tions of woman, revealing the wonders of the female character and way of thinking, so different from man and scarcely ever understood by him. He also dwells especially and in a picturesque way upon the most tragical episode in the woman's life, when one by one the former beautiful woman sees her charms fading away, and he gives a mass of valuable hints and instructions how to defend herself against the onslaught of old age; and not only her bodily condition but also the mind, for there are many chapters also on the influence of the mind on the body.

Infant Feeding. By Clifford G. Grulee, A.M., M.D., Assistant Professor of Pediatrics at Rush Medical College, Chief of Pediatric Staff, Cook County Hospital. Second Edition, Thoroughly Revised. Octavo of 313 pages, illustrated. Philadelphia add London: W. B. Saunders Company, 1914. Cloth, $3.00 net.

This edition has been revised especially from the scientific facts which the last two years have brought forth. In that time nothing has been presented which would revolutionize our ideas on the subject of infant feeding, but there has been a gradual accumulation of scientific data which has added materially to our knowledge, and the author has embodied such so far as possible without disturbing the text of the former edition.

Recent Studies of Tuberculosis. A Reprint of Articles Published in the Interstate Medical Journal. St. Louis: Interstate Medical Journal Company, 1914.

A review of what has been accomplished by medical science in the year 1913, to diminish the ravages of tuberculosis, needs to be judicial—even frankly conservative in appreciation of heralded progress. Workers of the most careful training and acknowledged genius of conception are striving constantly to reach a goal which the discoveries of Koch have shown to be possible of attainment. They, like others, may be, and often are, aroused by enthusiasm to announce tangible results, only later to realize a painful self-deception. In a general way the crusade has been conducted on the plan which some previous successes have consecrated.

We must still place in the front our inadequate measures of prevention—hygienic education to limit infection and contagion; isolation and hygienic treatment; increase of individual power of resistance by elevation of the general standard of healthful living. Society, guided by the best medical thought, continues to enlarge and perfect these necessary arms, but they can never win the battle unaided. When an organic cause of disease is limited in its ravages to the human family, we may, in the light of experience, hope to limit, even to eradicate it for all practical purposes, but when it affects, with slight distinction, many forms of animal life, the effort at eradication can have only a temporary or terrestrially localized effect. Given the increasing commingling of humanity on animal food products, especially on animal milk at the age of greatest susceptibility to tuberculosis; and given the necessary imperfect application of all laws and measures of general prevention of tuberculosis, we must realize why science has thus far had to wage a war affording few trophies. Of the evidences of partial victories, of course, the most encouraging is the statistical revelation of a diminished death-rate from tuberculosis in the countries where hygienic laws have been made and intelligently enforced. Here we find reason enough to continue and increase the effort to educate the people.

So strong is the fight against tuberculosis that there appeared in the Interstate Medical Journal for March and April of this year only articles on tuberculosis, presenting the disease in all its facets so that the reader might know its status in a medical and sociological sense. These articles, it was thought, if published in book form would be the means of concentrating attention on all the phases of the disease and the treatments that have been advanced, as well as on the means employed today to prevent its further dissemination.

This volume will undoubtecly be of great value to the profession and it has given the reviewer a great deal of pleasure to look over it. All the articles are interesting as are the illustrations.

Price $1.50.

Abstracts of the Leading articles of the month.

A Streptothrix in Cases of Banti's Dsease.—Gibson (Proceedings Royal Society of Medicine) has discovered, by Wheal and Chorm's special method, a network of the mycelial threads of a streptothrix in the spleens from several cases of splenomegaly. These parasitic structures were generally associated with the walls of the veins and their immediate neighborhood, and this may account for the frequency of infarcts. The negative results of cultures from cases examined by many observers is not to be wondered at when the shyness of growth of many streptothrixes is borne in mind.

Treatment of Progressive Paralysis.—Pilcz (Muench. med. Wochenschr.) says that it has been noted that paretics often improve after intercurrent febrile affections, the attempt has been repeatedly made to use therapeutically substances that induce fever and leucocytosis. And, indeed, long continued remissions have so been obtained, much longer than those that occur spontaneously. Mercury and salvarsan alone are of little avail and, indeed, often do harm, but a combination of the specific therapy with this newer one may produce good results.

Pilcz gives a daily injection alternately of tuberculin and of mercury succinamide. The former is given in increasing doses, beginning with 5 mgrm., until 1.0 grm. has been used; of the latter, 0.02 grm. is given each time. Instead of the tuberculin, killed cultures of staphylococci or streptococci, or a solution of sodium nucleinate may be used; the mercury may be replaced by salvarsan.

The Caviblen Treatment of Gonorrhea.—Bruck, Sommer, Glueck (Deutsch. med. Wochenschr.) mention an important contribution to the treatment of gonorrhea. Bruck has devised a 40 per cent. combination of silver with the stain uranin, which is said to surpass at once in effectiveness and in lack of irritating properties all other preparations. Uranoblen as it is called is a reddish brown powder and is used in the form of bougies to which the name caviblen rods (Caviblenstaebchen) has been given. They are prepared in two lengths, for anterior and posterior urethritis, and in several strengths. They are used just like the well-known protargol bougies, and, if the writers' statements are to be credited, mark a new era in the treatment of gonorrhea. For the details of their use, the reader must be referred to the original article.

A New Treatment of Hyperacidity.—Glæssner (Wien. klin. Wochenschr.) says that small amounts of biliary acids, introduced into the stomach, are able considerably to depress the secretion both of pepsin and of hydrochloric acid. In this way, the pains of gastric ulcer or erosions may be controlled unless the ulcer be much indurated or penetrating. The good effect, in the author's experience, usually persists even after the treatment is discontinued. It is successful if the ulceration is accompanied by hyperacidity or normal acidity, but not in the presence of a subacidity or anacidity. He administers 0.5 to 0.6 grm. cholic acid daily, a dose which is never productive of ill results.

Hot Baths in Infantile Pneumonia.—Arneth (Deutsch. med. Wochenschr.) says that the hydrotherapeutic treatment of pneumonia in children has consisted in cool baths, cold packs and cold douches. These procedures, however, presuppose a certain amount of resistance on the part of the little patients, enabling them to react against the cold. The stronger and the older the child, the better the results obtained by these methods. Emaciated, asthenic infants, however, react badly to any such vigorous withdrawal of heat. For them hot baths are much more beneficial. No matter how high their rectal temperature, the skin is either cool or easily chilled, and the application of cold leads merely to a peripheral anemia and a concentration of the heat in the internal organs.

The technique of the hot baths is as follows:

The weaker the infant and the higher its temperature, the more frequently the hot baths should be given, up to five times daily. The duration of the bath should be tin minutes if the rectal temperature is not over 102° F.; if higher, five minutes. The temperature of the water should be kept constantly at 106° F., hot water being added as required. If heat stagnation sets in, i.e., if the child's skin becomes hot and the head bright red in color or if there is much dyspnea, the bath may have to be interrupted. At the close of the hot bath, the writer uses the cold douche. This should be done as quickly and thoroughly as possible. A cupful of cool water is poured over the child's back, he is dipped into the warm water again, a cupful is poured over the chest and he is quickly dried and clothed.

The results are uniformly good. The breathing becomes deeper and more efficient and the general condition improves. The temperoture falls after the lapse of thirty to sixty minutes on account of the better peripheral circulation. The writer states that no one who has seen the good results following hot baths in this condition can fail to become an enthusiastic advocate of the method. He uses it not only in infantile bronchitis, bronchiolitis and pneumonia, but in all other infantile conditions in which the rectal temperature is high while the extremities are cool and the skin pale with livid mottling.

Pituitary Substance in Asthma.—Crookshank, in The London Lancet, refers to the well known action of adrenaline in asthma. The doctor has tried pituitary extract in similar cases with considerable benefit. He administered a tablet containing two grains of pituitary substance, night and morning,

to twenty patients, all of whom were greatly benefited. Two points are noteworthy: the majority of the patients gave up the use of stramonium powder, which they had previously found to be necessary; while those who had ceased to attend regularly usually came back for more tablets. Administration of pituitary extract is on the whole safe so long as there is a physiological need. The extract caused considerable diuresis, and during its administration the bowels acted more freely. The author has not yet given it to children.

Glucose Injections as Stimulant and Tonic.—Enriquez (Presse Med.) has employed with success intravenous injections of glucose in conditions of severe infection or intoxication, inanition, defective heart action, etc., in which the serious nature of the condition is indicated by the decreased output of urine. Injections of 250 or 300 c.c. are made into a vein at the elbow, an hour being taken to inject this amount. Fifty patients were so treated, some receiving two or three such injections daily, and several receiving as many as thirty injections in all. This strongly concentrated solution seemed to be quite harmless, there being in no case any indication of injury of the blood or other damage. The proportion of sugar in the blood keeps within normal range, and only a minute portion of the sugar passes into the urine, and this only for a short time after the injection. There is an increase in the total amount of blood; the blood pressure rises and the output of urine increases. The attraction of fluid out of the tissues is a powerful aid in ridding the system of toxins, bacterial or of other origin, and of poisons, especially accumulated anæsthetics.

Treatment of Myalgia.—Kesteven, in The London Practitioner, says that myalgia may be divided into muscular neuralgia and myalgia simplex. In the former, treatment must always be directed to the source of the mischief in the nervous system. In cases of severity, injections of morphia should be repeated daily, and the patient kept in bed. Counter-irritation may be applied along the course and at the spinal roots of the peccant nerves. Internally, bromides and iodides should be given, combined with sedatives. In myalgia simplex the exciting cause must, of course, be removed. The only true remedy for this condition is the healthy vital metabolism of the protoplasm itself. Removal of the pernicious influence allows this to come into play, and it may be backed up by attention to the general nutrition. The vaunted results of the use of mineral waters may, perhaps, give us an indication of how the natural powers of the protoplasm may be enhanced. The use of water, whether hot or cold, in abundance is indicated. Relief from pain follows the use of the salicylates; this is no doubt due to their powerful antiseptic action and consequent removal of the poisonous agencies which have been the cause of the mischief. It is doubtful whether salicin or any other drug produces this effect by direct action on the protoplasm.

Subcutaneous Injections of Emetine in Phthisis.—Raeburn (Brit. Med. Journ.) does not consider that emetine has any effect on the tubercle bacillus, but he believes it is a valuable addition to our weapons for reducing congestive conditions in the lungs and that, therefore, it is both a preventive and curative agent in tuberculosis. The doctor uses ampoules, which contain ½ grain of emetine in 15 minims of distilled water. By diluting this in four parts of water, 1 minim equals 0.04 cg., and Raeburn has come to consider 4 minims of this dilution a suitable dose to give when the object is to control expectoration or lessen congestion.

Raeburn confined himself to cases of hemorrhage. Some of the cases in which he used it had only slight and occasional hemorrhage but copious expectoration and it was observed that not only did all traces of blood disappear from the sputum, but that the sputum itself decreased or ceased. This observation induced Raeburn to employ the drug in some cases of copious expectoration alone and the results have been sufficiently striking to justify his mentioning them to the profession in the hope that others will be induced to further investigate the properties of emetine in relation to its effects on congestive and inflammatory conditions of the lungs. The writer has now used it in over forty cases, and has endeavored to note its effect both on hemorrhage and on expectoration.

Septic Puerperal Infection and Its Treatment.—Vineberg (Canadian Medical Association Journal) says that having concluded from our bedside observation that we are dealing with a puerperal infection, our next step should be directed to endeavor to ascertain the form and the course it is likely to follow. To do this a careful local inspection should be made, followed by a bimanual examination of the pelvic contents and, if possible, by a digital exploration of the uterine cavity. The perineum and vaginal canal should be thoroughly inspected for any tear or abrasion, and if such is found a note should be made of the appearance of its surface, whether it be clean-looking or covered with a grayish membrane. If the perineum has been sutured,

the sutures should be removed, so that the wound may be thoroughly inspected, remembering, however, that the infectious organisms may enter through such a wound and yet cause little or no local reaction. In such a contingency the infection rapidly becomes general and leaves us in no doubt as to the nature of the case. In the majority of instances, however, the organisms are not so virulent; they cause a local reaction and travel upwards along the blood or lymph vessels, more frequently along the latter. In that instance an exudate or peritonitis develops, with the signs and symptoms that accompany them. The treatment of infected areas in the perineum or vaginal canal should be based on general surgical principles of cleaning the wound and providing for free drainage. Next, the cervix should be exposed with a suitable speculum and note taken of its tears or wounds. Having failed to find any probable site of the infection in the perineum, vaginal canal, or cervix, the further step should consist in making thorough exploration of the uterine cavity with the finger or fingers. We are safe in asserting that fully 90 to 95 per cent. of the cases of puerperal infection originate in the interior of the uterus. A very large percentage of these are due to placental remains. A digital exploration of the uterine cavity is not always easy of execution, and may call for general anesthesia.

It may be well to draw attention to the fact that placental residues, even of good size, do not always manifest themselves by hemorrhages or fetid lochia, as is generally stated. Vineberg has frequently observed them in cases in which neither of these symptoms were present. Having found placental remains, what is the treatment to be instituted? Here we encounter a great diversity of opinion. At the present time the trend is toward a "let alone" policy unless there be hemorrhage. Vineberg is not in sympathy with such an attitude, and is of the opinion that the careful removal of such infected products of gestation will frequently arrest the process or aid very materially the economy to overcome the infection. How is the removal to be accomplished, with the finger or with a sharp or dull curette? Many a lance has been broken on this point. It seems a matter of less importance what is to be done and as to how it is done. One man may accomplish the object in view better with his fingers than he could with an instrument. Another feels safer with the use of the sharp or dull curette. Vineberg confesses to belong to the latter class.

A great deal has been said and written upon the dangers of breaking down the protection wall which nature forms underneath these infected tissues in the uterus. Based upon this fear, an author (T. J. Watkins, of Chicago) recently has advocated the packing of the uterus with gauze, in order to effect a separation and expulsion of the placental remains. It would be difficult to conceive of a more dangerous procedure. If we have learned anything in the past years in the matter of infection it is that there is no better way of making a local a general infection than by employing means to prevent drainage, and to place the infected area under high pressure. Every one today recognizes that a strip of gauze in the uterus, even as a drain, interferes with rather than facilitates drainage, leaving aside the fact that it is always increased by decomposition. If gauze used loosely as a drain acts just in the opposite manner, what will it do when it is packed tightly and kept in position for twenty-four hours?

After removing the placental remains, it is his custom to irrigate the uterus either with 50 per cent. alcohol or a weak solution of iodine. Thereafter the uterus is religiously left alone. Ergot, strychnine, and quinine are given in suitable doses to aid uterine contractions and involution.

The indiscriminate use of the curette cannot be too strongly condemned, and one cannot emphasize too forcibly the great harm that may be done when it is employed in a haphazard manner, as frequently is the case. His advice would be, when in doubt do not use the curette; usually the opposite course obtains, and because the patient has fever she is subjected to a drainage. It is scarcely necessary to add that the curette should not be used for septic and gangrenous endometritis; hence there is great danger of breaking through the protective zone which nature forms, leaving aside the impossibility of removing all of the diseased endometrium. It is doubtful, even, whether intrauterine irrigations in these cases do not do more harm than good. If the discharge be very profuse an occasional irrigation with some bland fluid to wash away the excess of discharge may be beneficial.

The formation of an exudate is, as a rule, a favorable omen and is nature's method of limiting the infective process.

Arteriosclerosis, Late Paresis and Trauma.—Lampe (Monatschrift f. Psychiatrie) discusses at some length the relationship between these conditions, and described the case of a man, 64 years of age. For about ten years he had shown slight mental symptoms which might be attributed to cerebral arteriosclerosis, when he received an injury to the head as the result of an accident. Six months later paresis developed and ran a typical and rapid course.

Autopsy showed typical paretic alterations, and also well marked arteriosclerotic changes. The case shows that the typical expansive form of paresis may occur after the age of sixty, and that even a very old brain with advanced arteriosclerosis is capable of marked infiltration and exudative reaction. Also the possibility of the combination of arteriosclerosis and paresis with the existence of the former for many years, before the outbreak of the latter. Infection had occurred forty years before the onset. The relation of the head-injury to the paresis was very plain.

Contribution to the Subject of "Hysterical Situation" Psychoses.—Felix Stern (Archiv. f. Psych. u. Nervin). This name is given by this writer to the hysterical twilight stages or stupors, sometimes found in criminals, usually under the form of dreamlike, or delirious or even stuporous confusion. He concludes in general: That this type of nervous disorder must be considered if the symptomatic picture is that of a catatonic or epileptic psychosis, even if epileptiform attacks of distinct character have preceded. These psychoses develop for the most part on the basis of a well defined psychopathic constitution. Various disturbances of the sensorium occur, from acute stupor or conditions of confusion (which are the more common) to very much slighter disturbances of similar character. There may also be a considerable change in the condition from time to time. The prognosis is peculiarly good, and usually no mental defect is left after recovery.

The Wassermann Reaction in Children.—Watson (Glasgow Medical Journal) having examined 1130 sera of his own cases, holds that his conclusions regarding this study should be of some value. The 100 controls were all negatives, these being in children without stigmata or specific history in the family. Of the second 100, taken at random, attending the out-patient department, 29 gave a positive result. Twelve of these showed clinical evidence of syphilis, and 17 were unsuspected, although 8 of the latter number were mentally defective. In these 17 unsuspected cases without evidence elicited by direct examination, it was found by Wasserman that a parent, brother, or sister exhibited a positive reaction. In most cases several members of the family gave positive results. Sixteen cases of congenital heart disease were positive in every instance. In 15 cases of meningitis with more or less hydrocephalus a positive result was obtained in every one. Eighty-five children, the offspring of tinkers, gipsies, and tramps, were examined. All gave positive reactions. Some of the cases appeared healty.

Hour-Glass Stomach.—Holland (Liverpool Med.-Chir. Journ.) has encountered in his practice as a radiologist 34 cases of hour-glass stomach in the past 3 years. Whilst recognizing the limitations of radiography as a means of diagnosis in affections of the stomach he clearly proves the unique value of X-rays in the diagnosis of this condition. Of the 34 cases in which an absolute diagnosis was thus established, in only two had it been previously made by the ordinary clinical methods, whilst in other ten cases it was mentioned as a possibility. The greater frequency of this condition in the female sex was fully borne out in his series, 32 of the cases being in women and only two in men. In every case there was a definite history of old-standing indigestion, and, in all, the stenosis was the result of ulceration. In several a deep excavated ulcer was demonstrable at the X-ray examination. In only one case, that of a woman aged 32, was any sign of malignant disease found.

From his wide experience in radiography of the stomach the writer is very sceptical of the prevalent view that gastric ulcer is a common antecedent of malignant disease of the stomach. Whilst the majority of cases of old-standing gastric ulcer examined by him have been in females, by far the larger number of cases of cancer have been in males, and the latter have almost always given a history of only a few months of indigestion.

Theory of Pathogenesis of Dermoid Cysts of the Ovary.—Termier (Rev. mens. de gyn. et d'obst.) mentions a new theory of the causation of dermoid cysts, rejecting the older one of included layers of the ovum as insufficient and not applieable to all the symptoms. The doctar mentions a case in which several dermoid cysts were found, occupying both sides of the adnexa, and states that inclusion of layers would hardly occur on both sides in the same individual. The theory is stated thus: the living being arises from a single cell, which becomes differentiated so as to produce all sorts of tissues: with regular development the result is a normal being: with irregular development it may be a monster or a complex tumor. The productive power of the cells gradually decreases. Each cell contains the germ of other tissues. One cell is capable of producing bone or cartilage, another nerve, and another epithelium, mucosa, or hair. Any abnormal excitation, a karyokinetic derangement, may cause formation of all the histological tissues of which normal

deuelopment is capable. A special degeneration of the ovule, associated with consecutive proliferation of the Graffian follicle may occur. The best argument for this theory is the impossibility of accepting any other solution. We have learned that other influences aside from fecundation may cause development: saline solutions, dehydration of tissues, variations in osmotic pressure are such causes. Physical agents such as heat may also cause changes. There may be exciting or retarding influences on the cell. Teratological development may result in complex products and appearance of adult tissues, such as bone and cartilage. According to the stage of maturity, and the amount of male substance added to the ovum parthengenesis will conduct this ovule to an embryonic stage more or less advanced, but recognizable in spite of abnormal and monstrous characteristics. Irradiation of spermatozoa affects the result of fecundation. In the human ovary some cells may be arrested and develop abnormally into dermoid cysts. The cause of arrest may be uterine, such as myoma uteri: change in circulation, edema of lymphatic origin, may cause through a hydrosis or osmotic variation the same results as parthenogenesis.

Treatment of Tuboovarian Varicocele by Intraligamentous Venous Ligation.—Seucert (Arch. mens. d'obst. et de gyn.) considers the treatment of true tuboovarian varicocele by intraligamentous ligation of the veins involved. He limits his subject to the variety in which the condition is not secondary to other pelvic troubles, but may coincide with varicose veins of the legs. He mentions a number of cases of this condition, some of them observed by him to show the existence of apparently idiopathic cases. This condition is often alone responsible for a train of pelvic symptoms including pain, dysmenorrhea, and similar symptoms, and relieved entirely by resection of the varices in the broad ligament. Seven such cases have been operated on by the author with six successes, the one failure being in a patient whose operation showed a large sclerotic uterus. The pathogenesis of this condition does not differ from that of varices in other situations. Mechanical, constitutional, and infectious factors unite to bring about mesophlebitis and ectasia of the veins of the broad ligament. One mechanical cause may be pressure of clothing over the abdomen; another the elongation and increase in volume of the uteroovarian veins in the course of frequent pregnancies occurring at short intervals. The diagnosis is very difficult, since the symptoms are the same as those of many other pelvic conditions. The chief diagnostic sign is the presence in the posterior cul-de-sac of a tender mass that is neither a prolapsed tube nor ovary and which can be seized between the external and internal hands. Varices of the legs, vulva, or abdomen tend to be coincident with the internal ones. Medical treatment of the character usually given for pelvic conditions will have only temporary effects on this condition. Operation may be by ligation or resection of the varix. Conservative surgical treatment applies to it the same measures as are used in scrotal varicocele, that is resection of the intraligamentous varices with shortening of the ligament. The operation begins with median laparotomy. Raising the broad ligament with forceps, at its upper border, between mesosalpinx and mesovarium, an incision is mode including the thin peritoneal layer transversely from one end of the ligament to the other. The masses of veins are isolated through this incision, tied together at the side of the uterus and cut away between two ligatures. The same ligation is carried out at the other end of the ligament. The end of the ligatures are then tied together so as to shorten the ligament. The peritoneal incision is sewed up and the wound closed with drainage. The existence of these varices may be a cause of secondary troubles, edema of the ovary, progressive interstitial sclerosis, changes in ovulation, and uterine sclerosis. The passive congestion caused by the varices produces pain and dysmenorrhea, which cannot be relieved by ordinary treatment, but which does not necessitate a mutilating operation.

Miscellaneous.

The Nervousness of Alcoholism.

In the unstable nervous states following alcoholic debauches—irritability, sleeplessness, etc.,—Bromidia (Battle) will be found an agent of exceptional influence in bringing about a disappearance of the symptoms. It exerts a soothing effect upon the cerebrospinal centres and secures rest for the patient.

A "Brisk" Laqative

is one of the every day prescriptions of the average physician. Frequently a thorough unloading of the bowel is all that is needed to dissipate the symptoms and complaints of the patient; more often a brisk laxative is needed, preparatory to the institution of a regular course of treatment. Undoubtedly a saline is indicated more often than

any other form of laxative, but most patients object to the bitter, more or less nauseous taste of the ordinary Epsom, Rochelle, or Glanber's Salts. The various mineral waters are expensive and not too palatable; many of the effervescent salines on the market are combined with antirheumatics, anti-lithics, cardiac stimulants, headache remedies, or other unnecessary drugs. When a physician desires to prescribe a brisk saline laxative and nothing more, he will find Ulax Salt especially desirable and efficient. This new effervescent saline resdmbles, in composition and effect, the natural Hungarian Mineral Waters of the sulpho-saline type, but is much more agreeable to the taste. Two teaspoonfuls of Ulax Salt, in a glassful of water, immediately upon arising, forms a draught of a clean saline taste, which is agreeable and appetizing, rather than nauseous or unpleasant. It is entirely free from sugar, saccharin or flavoring material of any kind, and is thus safe for Diabetics, Rheumatics o4 Dyspeptics, when intestinal flushing is required. Ulax Salt is especially serviceable as a neutralizing laxative in Gastric Hyperacidity, Intestinal Dyspepsia, Hepatic Inactivity, Auto-Intoxication, etc. By unloading the bowel, it tends to relieve headache, lassitude, drowsiness, and all conditions caused by toxic absorption from the intestinal tract. The morning dose of Ulax Salt is also of marked value after alcoholic excesses. It acts as a mild aperient, a brisk laxative or a pronounced cathartic, according to the dose taken. Physicians are requested to send for sample and literature to F. H. Strong Company, 56 Warren Street, New York.

A New Tankless Pump That's Different From the Rest.

The Utility Tankless Pump, just placed on the market by the Victor Electric Company of Chicago, in addition to supplying non-pulsating compressed air with a maximum pressure of 50 pounds, under suitable control for all types of spray, nebulizing, and powder blowing bottles, and deep suction or vacuum for cupping, Bier's hyperemic treatment, etc., and a pneumatic massage stroke—also delivers vibratory massage, nasal drilling, and heated air.

This most useful instrument is very compact, occupying a space only 9 inches by 10 inches.

This pump is an instrument which will make itself useful every hour of the day and the selling price is remarkably low.

A four page circular illustrating and describing this pump in detail will be sent on request, by addressing the Victor Electric Company, Jackson Blvd. and Robey St., Chicago.

An Aid in Obstetrics.

I wish to mention one point in my obstetric work. In nearly all of my cases I give one Abbott's H-M-C (half strength) at the beginning of the second stage of labor, or after the pains begin to come strong and regular.

Why? Because it saves suffering, stimulates and strengthens the pains, making them come a little farther apart toward the last, and thus allowing more rest to the patient and greater dilatation of the soft parts.

Is this not rational? If not, why not? I have never had one single unpleasant aftereffect from the use of this tablet, and I have used hundreds of them.

Later on in labor, if the forceps is needed and chloroform as well, you are just one point ahead by having given the H M-C as it lessens the danger in giving chloroform and, besides, not nearly so much is required

In two cases, when I was a long distance in the country, my chloroform gave out and time meant a life. I used three H-M-C's, completely anesthetizing the potient, which I had to do in order to do the work.

One case was where two other doctors were present, and craniotomy was resorted to. The other case was of the same kind (craniotomy) and I had to do that by myself, the nearest doctor being twenty-five miles away. Both of these recovered nicely. One I have attended twice since in normal labor and the other once.

If 389 cases of obstetrics in ten years, without one single accident from the use of this preparation, is not sufficient for even a country doctor to be considered somewhat of an authority, I am egotistic enough to ask why.

Dr. John Russell Smith.

(Abstracted, with slight revision, from an article appearing in "The Medical World" of May, 1014).

Dependable Therapeutic Action.

It is freely conceded that the drugs or remedies that can be relied upon to produce definite and uniform physiologic effects are limited in number. The great majority of drugs depend so largely on dosage, the conditions under which they are administered, and individual idiosyncracy, that the effects that result are in most instances decidedly uncertain and only to be determined by actual test. There are a few drugs, however, that have well defined action, which the practitioner can be sure will follow with practical certainty. Among such definite

acting medicaments the bromides are particularly noteworthy, for there are few drugs that are more positive, pronounced and definite in their power to modify or influence certain of the physiologic conditions of the body. But clearly defined as is bromide action generally, even this has been found more or less subject to the purity and quality of the drugs employed.

It is recognition of this fact that leads so many discriminating physicians, when bromide-therapy is indicated, to turn to Peacock's Bromides, for experience has shown that this product is not only made from neutral bromide salts of the highest purity and quality, but compounded with a degree of care and skill that assures constant unvarying uniformity. It is not surprising, therefore, that Peacock's Bromides are so generally considered the ideal bromide preparation, as well as the most reliable sedative, anti-spasmodic and anti-convulsive. But it is not alone to therapeutic efficiency that the popularity of Peacock's Bromides is due. The more this combination has been used the more evident it has become that its purity and quality guarantee a gratifying freedom from the gastric disturbance and other symptoms of bromism that the ordinary bromide salts usually produce. Consequently in employing Peacock's Bromides, the painstaking practitioner not only insures the therapeutic results he desires, but saves his patient from disagreeable and annoying effects that he would be sure to suffer from inferior preparations of the bromides. Is it difficult to understand, therefore, why Peacock's Bromides are so generally employed or prescribed when bromides are indicated?

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application. the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

Placing the Blame.

At the present day much discussion is being heard on every side concerning the intestinal canal in the causation and development of innumerable diseases. Once the liver was the chief malefactor, and a disordered liver if not blamed as the chief cause of pretty nearly every disease that "human flesh is heir to," was sure to be considered particeps criminis. As the indictment of the liver has been narrowed and its culpability brought within more specific limits, some other culprit has become necessary. How natural to turn to the liver's closest associate and known accomplice, the intestinal tract! Thus it is that the "human cesspool," as Sir Wm. Arbuthnot Lane has styled the intestinal canal, has had to stand accused of the etiologic crimes that the liver is no longer held accountable for.

But, as always happens, interest in the depravity of the new culprit has made the actual misdeeds of the old lose much of their importancer And so, gradually but none the less surely we have grown to ignore the crimes of the liver, uutil at last in our indignation at and fear of the intestines, we are almost ready to look upon the liver as "more sinned against than sinning," a victim of hasty and unwarranted accusation.

With this state of affairs, it is not surprising that the liver, wily and dangerous old offender that it is, has been allowed to perpetrate many outrages without being called to account. It is high time that medical men awoke to the fact that the liver is the same old trouble-maker it has always been, and needs watching as closely as ever.

Indeed, recent study of intestinal stasis and associated conditions has shown that the liver is often the main culprit even in this affection. The action of the bile in controlling intestinal putrefaction, arresting bacterial activity, promoting peristalsis, and assisting digestion makes it highly necessary that this important secretion be frequently interrogated as to its quantity, and any decrease in the bile output given instant and vigorous attention.

This naturally raises the question, what is the best and most effective cholagogue? Many and various hepatic stimulants have been brought forward, but experience has shown that for promoting the functional activity of the liver nothing is superior to Chionia. This is an exceedingly effective preparatisn of Chionanthus Virginica. Administered in proper dosage it is a powerful

hepatic stimulant, increasing the flow of bile, without, however, producing the marked and extreme catharsis that makes so many other hepatic remedies highly objectionable.

Clinical experience has shown that Chionia is, therefore, an exceedingly effective means of correcting intestinal disorders due to the shortcomings of the liver. In other words, its use can be relied upon to restore both offenders to good behavior.

A New Method of Administering Ipecac in Amebic Dysentery.

Prof. John Uri Lloyd discovered that a form of hydrated aluminum silicate has the peculiar property of absorbing alkaloidal salts from aqueous solutions. That is, it precipitates the alkaloids from the solutions by an action with a change midway between a chemical combination and a mechanical mixture. The alkaloids thus treated can be liberated only in the presence of alkalies.

Ipecac, long looked upon as a specific in amebic dysentery presented many difficulties in its administration and thus retarded the cure of amebic dysentery. And so when a new enteric such as Prof. Lloyd's compound which he named Alcresta and assigned to Eli Lilly & Company for development was placed before the medical profession it caused much comment and naturally proved a topic of discussion before medical and scientific socleties. Unlike salol or other enteric preparations Alcresta Ipecac will disintegrate in the stomach but the alkaloids of ipecac are not liberated until the alkaline intestinal juices are reached. Thus no nausea or gastric disturbance is felt.

Reports on the use of Alcresta Ipecac Tablets, each one of which represents the full activity of 10 grains of powdered ipecac, state that "it causes no unpleasant effects such as are usually met with in the administration of ipecac" and "that taken internally Alcresta Ipecac does positively destroy the amebæ and does not cause nausea or in fact any ill effect whatever."

Further information on Alcresta Ipecac, Lilly, is now ready and will be supplied upon reviuest to the Home Office of Eli Lilly & Company at Indianapolis.

Conditions of Reduced Vitality.

It is especially in states of lowered vitality following continued application of whatsoever character marked by loss in bodily strength and nervous force, that Cord. Ext. Ol. Morrhuæ Comp. (Hagee) is of more than ordinary value. It is not alone a tissue food but also serves as a nerve tonic. A distinctive feature possessed by the cordial is its palatability, an advantage appreciated particularly by women and children.

A High-Potency Diastase.

The doubling of the liquefying power of Taka-Diastase, through recent improvements in the process of manufacture, as announced by Parke, Davis & Co., lifts this agent into a position of commanding eminence as a diastasic ferment. So potent is this improved diastase that in ten minutes, under conditions of temperature and moisture corresponding to those existing in the normal stomach, it will liquefy three hundred times its weight of starch.

For the information of physicians who are unfamiliar with its nature and origin, it may be said that Taka-Diastase is obtained from the fungus Aspergillus oryzae, which from time immemorial has been used in Japan for the saccharifying of rice. This fungus contains not merely an amylase, but a mixture of various enzymes. It possesses amylolytic power to a much greater degree than any of the other species of the Aspergillus family.

Taka Diastase is serviceable in the treatment of amylaceous dyspepsia, in chronic gastritis, in hyperacidity, in the vomiting of pregnancy, in infantile diarrhea and dysentery. It may be prescribed in liquid, powder, tablet and capsule forms, also in combination with other agents in capsules and tablets. It should be taken during or immediately after meals in order that it may act upon the starches in the stomach before the acid wave sets in.

Asthma.

Few diseases can cause more real suffering and distress than asthma. For this reason, as well as the well known tendencies of each attack to aggravate and increase any existing cardiac or circulatory weakness, the most careful and faithful attention should be given to its treatment. Many and various are the measures that have been employed, but among clinicians of the widest experience, iodine in one form or another is generally recognized as the most efficient remedy for reducing the frequency and severity of paroxysms of this disease. Of course, the immediate treatment of an attack calls for measures to relieve the spasm and attendant distress as quickly as possible. But when this is accomplished, efforts to prevent or reduce to a minimum future

attacks must be promptly instituted, and it is in this direction that iodine has proven its efficiency.

As in all other instances, however, where iodine has been indicated, the gastric irritation that has usually resulted from the particular salt or preparation of iodine employed, has all too often made it impossible to administer this potent remedy as continuously or in as large dosage as needed to produce the desired results.

With the advent of Burnham's Soluble Iodine, iodine therapy took on an entirely new aspect, and the ease and rapidity with which this scientific product was absorbed without the slightest gastric or other disturbance, established its therapeutic utility at once. The remarkable possibilities of such a preparation of iodine were readily seen and the place it was straightway accorded in the modern armamentarium pointed in no uncertain way to its superiority over all other iodine products.

In the treatment of few diseases in which iodine is indicated has Burnham's Soluble Iodine proven more efficacious than in asthma, and because it can be used in appropriate dosage for long periods without interruption, the results are usually most gratifyiog. It is not at all surprising, therefore, that Burnham's Soluble Iodine is so often turned to by physicians as a matter of course in the treatment of asthma.

Common Ssnse in Managing Digestive Disorders.

The artificial digestives have their place in modern therapy, but their use should always be tempered with sound judgment. Otherwise conditions we seek to correct are very apt to be aggravated. Undoubtedly we have placed too much reliance on the digestants and as a consequence have often done more harm than good. As one physician states in referring to the digestive function: "Nature should be gently assisted in the human economy. If we persist in doing its work, like the lazy man,it soon depends on that assistance. This is true to the action of the liver, stomach, intestines, as well as all functions of the human anatomy. How often do we meet with individuals who are habitually dosing themselves whenever an action of the liver cr bowels is required, and others who require a dose of pepsin or one of the many artificial digestives after each meal. This is all wrong. The functional activity of the entire process of digestion should be encouraged, and any remedy that will specifically stimulate these functions to their healthy action is of greater service in digestion than pepsin. Seng, a remedy that has a well defined secernent action on the glands and mucous membranes of the stomach and intestines, thus compelling the secretion of "Nature's own digestive fluids, is the modern treatment for dyspepsia."

To Lighten the Heart's Burden.

In general practice few remedies are more commonly needed than a safe and reliable cardiac tonic. Not by any means a drug or remedy that will simply whip up and stimulate an organ that may already be laboring under a burden over-heavy for its capacity, but on the contrary, a remedy that will impart new strength to the heart and by giving it new power and tone relatively lighten the load it is carrying. Such a cardiac tonic is Cactina Pillets, a remedy that in the hands of thousands of competent physicians has been found one of the most valuable in the whole realm of therapeutics. In countless cases of cardiac disease it has been employed with the most positive and gratifying results.

It is especially indicated in all functional heart diseases such as tachycardia, palpitation, feebleness; in the cardiac weakness and nervousness caused by excessive use of tobacco, tea, coffee or alcohol; to sustain the heart throughout many chronic and febrile diseases; to strengthen the heart of the convalescent; and for its support during the period of gestation. It has proven itself the safest cardiac tonic when the musculo-motor action of the heart requires strengthening or guarding and seems to promote the nutrition of the whole organ through its effect on the local circulation. In consequence there is ample justification for the statement so often made in describing Cactina Pillets that this remedy is a persuasive cardiac tonic, not a therapeutic lash.

Hereditary Syphills.

One has only to witness the fearful effects of inherited syphilis to realize the urgent necessity of instituting effective treatment at the earliest possible moment. Fortunately, there is hardly any disease that is more responsive to treatment than syphilis of hereditary origin. For many years syrup of iron iodide held first place in the regard of those physicians who were meeting these cases in greatest number. The frequency, however, with which this product gave rise to gastric irritation made results from its use most uncertain, since it often had to be suspended for longer or shorter periods, during which relapses were, of course, inevitable.

So in spite of the fact that the profession possessed certain well established specifics for hereditary lues in the iodides, their use

was greatly limited by their constant tendency to upset and derange the digestion.

When Burnham's Soluble Iodine was placed at the service of the profession, it very soon became evident that a new era had dawned in iodine therapy. Careful, discriminating clinical tests showed at once that here at last was a preparation of iodine that could be relied upon to accomplish every therapeutic effect of the most efficient iodine product, but without the unpleasant and highly objectionable tendencies toward gastric derangement that had so seriously restricted the use of other salts or preparations of iodine.

Countless medical men, therefore, employ Burnham's Soluble Iodine to the exclusion of all other preparations of iodine, for they appreciate not only its therapeutic efficacy, but its remarkable freedom from gastric irritation. In the treatment of hereditary syphilis it has given exceptional service, for even in the youngest infants it has been possible to administer it in sufficiently large dosage and for sufficiently long periods.

In brief, the use of Burnham's Soluble Iodine insures the specific effects of iodine with a degree of certainty that cannot fail to appeal to the zealous, painstaking physician.

The Treatment of Auto-Intoxication.

The painstaking physician has but to observe the notable effect of Burnham's Soluble Iodine in a case of auto-intoxication to realize that in this valuable systemic eliminant the medical profession has a remedy that can be relied upon to free the system from its metabolic ash. The cells are stimulated to increased activity, a proper balance in respect to repair and waste is established, accumulated refuse is thrown out into the main drainage channels, and the emunctories—waste outlets—respond to the work placed upon them. In brief, in cases of waste retention, Burnham's Soluble Iodine furnishes the exact impetus or stimulation needed to enable the cells, tissues and organs to "clean house" and maintain the proper elimination of the effete products of metabolism. It has a unique utility in this direction, a utility that every clinician will grow to appreciate as his experience with this remedy extends, and he observes not alone its therapeutic dependability, but its notable freedom from those drawbacks that in the past have so generally restricted the use of iodine, the one great specific for auto-intoxication.

In these cases Burnham's Soluble Iodine should be given 6 to 10 minims well diluted, t.i.d., and at bedtime each day some mild laxative like cascara sagrada or phenolphthalein to insure one or two movements daily from the bowels. The results that follow are as gratifying as they are pronounced.

A Novel Educational Exhibit at Atlantic City.

Motion pictures to be used as a means of demonstrating to the profession the methods used for producing Antitoxins, Bacterins, Vaccines and Curative Serum.

At the meeting of the American Medical Association, to be held in Atlantic City, June 22nd to 26th, the H. K. Mulford Company will exhibit motion picture films, made by them at great expense showing the different processes employed in the production of biological products.

This will be the first time to our knowledge that motion picture films have been used for showing the processes used in the production of biological products.

Not only do the films show the laboratory methods used but also the actual application of these preparations from the clinician's standpoint.

A short description is thrown on the screen before each process is shown, describing the pictures, so that they bear their own explanation.

Because of the fact that no suitable space could be secured in the exhibit hall, the H. K. Mulford Company have arranged, through the courtesy of the Chalfonte, to show these pictures in the auditorium on the main floor of this hotel. These films will be exhibited several times each day and arrangements are being made so they will not conflict with the general or special sessions of the meeting.

Next to visiting the Mulford laboratories at Glenolden, which is a trip that every physician should avail himself of, an inspection of these films will convey a clear idea of what it means io provide adequate equipment for the production of the various biological products, particularly diphtheria and tetanus antitoxin, typho-bacterin and preparations for the prophylaxis and treatment of infectious and contagious diseases.

Lichen Planus Hypertrophicus.

Corbett reports the case of a girl aged fifteen years who came under observation a fortnight ago with this condition which had started six weeks previously. The patches had a linear distribution on the anterior aspect of the right arm, extending to and involving part of the thenar eminence. The lower patches were raised above the level of the surrounding skin and were covered with a dense layer of horny epithelium.

The patch of the upper arm was of more recent origin and it could be seen that the process had started in the hair follicles. Pigmentation was evident in the older lesions, being of a bluish red color. There were no other lesions on the body. The patient had had two one-third pastille doses of x-rays at an interval of a fortnight, which had altered the appearance of the lesions considerably, all the hyperkeratosis had disappeared, and the patches were now level with the surrounding skin. No other treatment had been used and no arsenic had been given. The condition at first sight resembled a unilateral nævus, but closer inspection, and the fact that improvement under x-rays had been so rapid, showed that it was a hypertrophic lichen planus with a linear arrangement. The age of the patient and the unilateral distribution marked this as an unusual case.—Proceedings of the Royal Society of Medicine.

Splenic Enlargement, Hemorrhage, Anemia, with Oral Sepsis.

Wynter reports the case of a man aged 50 who had severe epistaxis in May, 1913. He went to the hospital and the teeth were attended to after the bleeding had been stopped. On August 10 there was sudden pain below the left ribs; the spleen was found enlarged, and when the patient was admitted to the hospital on August 20 it extended to within 1½ inches of Poupart's ligament, and 2 inches beyond the umbilicus in the middle line. It was firm and not then tender. The heart and lungs were normal. On September 10 sudden and severe pain occurred over the spleen, with subnormal temperature, vomiting, and collapse. Friction could be heard over the organ, which was apparently the seat of an infarct. A similar attack occurred two days later, but less severe, and no friction could be detected. On September 18 severe and persistent epistaxis occurred, which was only arrested by plugging the nostril. On September 25 this recurred with less severity, both attacks being preceded by severe headache. No lesion of the mucous membrane could be detected. Apart from the leucocyte count the picture was that of splenic leukemia. The urine contained 0.3 per cent. of albumin, but was otherwise normal; specific gravity 1020; it was acid and clear; albumoses were not found. The teeth were much decayed, have been entirely neglected, and there was extensive pyorrhea.—Proceedings of the Royal Society of Medicine.

The Anglican Church and "Faith Healing."

We have on many occasions dealt with "faith healing"—using that term as meaning the cure of disease without the intervention of any known physical agency—and we have endeavored to show that what we called "miracles" are not peculiar to any religion, Christian or other, and have been wrought by "animal magnetizers" and healers of various kinds, who are not in any ways associated with theological or spiritual formulas. We have constantly maintained two propositions: (1) That it is foolish to declare dogmatically with Matthew Arnold, following Renan, that "miracles," in this sense, do not happen; (2) that the operative factor in spiritual healing is the ill-defined force known as "suggestion." It is in very truth, the patient's faith that makes him whole. That faith can be excited by certain beliefs, by certain personalities, and very largely by "imitation," the potency of which was clearly recognized by the French Commission which reported on Mesmerism in 1784. Belief in "miraculous" cures is like panic or enthusiasm—whether religious, military or political—in the highest degree contagious: and it is amid crowds of devout believers thronging around a famous shrine, with all the accessories that contribute to quicken faith into the force that "moves mountains," that such events are most common.

As we have repeatedly pointed out, however, there are very definite limits to the curative power of faith. Roughly, these limits may be indicated as corresponding to the boundary between diseases which are called "functional" and those which are "organic." As medical science progresses and research reveals the secret springs of disease the class of functional disorders steadily becomes smaller. Therefore, as knowledge advances "miracles" become fewer, and such as seem to remain tend more and more on scientific analysis to resolve themselves into natural phenomena.

We are glad to note that these views are finding acceptance among the more enlightened of the clergy. In a Charge delivered to the clergy within the Archdeaconry of London on April 23rd, 1910, by Dr. Sinclair, then Archdeacon of London, the British Medical Journal is freely quoted and with approval. His conclusions are summed up in twelve propositions of which we need only quote those that directly concern the medical profession. After stating that the powers of healing exercised by Christ were continued in the primitive and mediæval Church, and have continued with various

intermissions to the present day, he says that these powers are not different in kind from those exercised through faith in God even in pagan and heathen countries. He adds that they are efficient "chiefly through what is known in psychology as the subconscious self, and may work either through hypnotism and its kindred agents or through suggestion or through personal faith." Faith may be aided by certain religious rites, but while such ministrations fall within the province of the clergy, "the use of suggestion or any other form of mental therapeutics was not confined by our Lord to any section of His Church." Dr. Sinclair goes on: "As the science of healing has by common consent passed into the hands of the medical and surgical professions, nothing can properly be attempted without their sanction." Further, "any alleged success in healing by faith must be subject to the most public tests."

Canon Henson has lately dealt with the subject in a like spirit, but with a wider reach. In an address delivered at Greenlanes Congregational Church, Harringay, on December 10th, he formulated his views in the following four propositions: (1) "Faith healing" appears to be coextensive and coeval with religion itself. It is nowise distinctive of Christianity. (2) "Faith healing" appears to have no necessary connection with moral excellence either in the "healers" or in those whom they "heal." It is throughout non-moral, and cannot, therefore, have any proper relation with Christianity. (3) "Faith healing" appears to be limited in its efficacy, which could hardly be the case if it were really the direct Divine response to human faith. Only some forms of disease are capable of being cured by "faith." (4) "Faith healing" appears to be identical in all but name with healing by means of suggestion, and therefore offers no real exception to the known procedures of Nature.

By way of illustrating the revival of faith healing in recent years in America and in this country, he referred to the Emmanuel movement, to "spiritual healing" and to Christian Science. All these have been fully discussed in the Journal, and we are glad to see that Canon Henson clearly recognizes the folly and danger of these things. He rightly pointed out that "a recrudescence of mediæval modes of thinking implies an intellectual degradation which cannot be confined to the sphere of religion." He strongly deprecates the practice of healing by the clergy, in the first place, because it is not their primary work; and secondly, because, even if they possess an extraordinary healing gift, they have not the requisite medical knowledge to make an adequate diagnosis, and may do serious mischief by attempting to deal with cases in which scientific treatment was necessary. Moreover, such pretensions on the part of the clergy encourage in superstitious minds a radically false notion of physical well-being, and they excite hopes in many cases doomed to disappointment. He added that "suggestion" was taking its place among the recognized methods of medical science, and it was not reasonable to isolate it from the others. He concluded by reminding his hearers that the progress of medical and surgical science had been conditioned by its emancipation from theological presuppositions, and he held it impossible to believe that there could be any return to the old bondage. This frank declaration on the part of a divine so distinguished as Canon Henson will be welcomed by the medical profession, especially in view of the fact that not a few of his brethren have been playing with the theory he so unequivocally condemns.

But the doctors are not altogether free from blame. They have taken up the attitude of Gallio in respect to those things in which they should be profoundly interested. Mere scepticism, with no more solid foundation than the prejudice of an education that takes heed of nothing which cannot be seen or felt, weighed, and measured, is not a truly scientific position. We have often advocated a more serious study by men of adequate scientific training of the nature of suggestion and the conditions under which it can be brought into play. The mystical element should be altogether eliminated, and while every advantage should be taken in suitable cases of religious faith as expressed in prayer, the other factors, such as the personality of the doctor, should not be overlooked. It is certain that one man will succeed where another equally learned and skilful will fail. Why? One reason is the power of inspiring hope, which in itself is a potent remedy for many ills. It is to this side of human nature that quackery appeals—not always in vain. Not for the first time we urge on all medical practitioners the value of a knowledge of the workings of the mind and especially of the heart of "this foolish, compounded clay, man." The kind of knowledge required is not to be gained in laboratories, valuable as are the results of experimental psychology. It is to be got from the great observers and painters of human nature—the poets, the novelists, and the moralists. Sydenham's famous reply to Blackmore when he asked what medical works he should study—"Read Don Quixote; it is a good book; I read it still"—was not only a

jest; it contains a large amount of truth.—British Medical Journal.

Deformity of the Spine Possibly of Congenital Origin.

Forbury reports the case of a girl aged five and a half who was brought to the Belgrave Hospital with history of pain beneath the left costal margin of some two or three weeks' duration. On examination: Healthy looking child. Prominence of lower dorsal and first lumbar spinous processes. Slight mid-dorsal lateral curvature with convexity to the left. Movement of spine good. No pain elicited on "jarring" spine. No alteration in length of limbs. No abnormal physical signs in chest. Von Pirquet's reaction slightly positive. X-ray examination revealed wedge-shaped condition of first and second lumbar vertebræ, and the interval between these was less than between the bodies of adjacent vertebræ. The skiagram suggested the presence of an extra lumbar vertebra.—Proceedings of the Royal Society of Medicine.

The Treatment of Irritable Cough.

Luff has found the following a very useful mixture for the relief of irritable cough, and especially of post-influenzal cough:

℞ Morphine hydrochloride, 1-24 grn.
Heroine hydrochloride, 1-24 grn.
Apomorphine hydrochloride, 1-48 grn.
Dilute hydrochloric acid, 5 minims.
Syrup of wild cherry, ½ dram.
Chloroform water, ad ½ ounce.

This dose should be taken every four hours. The medicine is very palatable and the presence of the hydrochloric acid effectually prevents the precipitation of any of the alkaloids.—The London Lancet.

New Studies of the Pathology of Trichinosis.

Gruber sums up his article as follows: The presence of trichina cells in the muscles conditions a toxic action on the infected organism. The toxins proceed both from the disintegration products of the muscles, and from the secretions of the parasite and are doubtless distinct substances. As a result of the entrance into the blood of the secretions of the parasite a blood eosinophilia develops and a tissue eosinophilia follows. The eosinophile cells are formed by preference in the bone marrow. The claim that the serum of infected animals is toxic cannot be confirmed, and another assertion that trichinosis in the intestines can give rise to a bacteriemia is highly improbable. The furuncles seen in trichinosis subjects are due to the ordinary local causes. The phenomena seen in the liver and kidneys in acute trichinosis require further study. The entire subject, much as it has been and is being studied, is still obscure in many respects.—Munchener medizinische Wochenschrift.

Antimony in Syphilis.

While most investigators in chemotherapy have devoted their attention to compounds of arsenic, the claims of other drugs have perhaps been somewhat neglected. It is, therefore, interesting to notice recent researches with antimony, a drug with certain chemical resemblances to arsenic. Not long ago Neisser suggested that it might possibly be of value in syphilis. Tsuzuki conceived the idea of replacing the arsenic of salvarsan by antimony, and the benzol ring by tartaric acid, a substance which is well known to have affinities for certain bacteria, and even to act as a nutrient medium for them. According to Ehrlich, the action of salvarsan on the spirochæta is due to the presence of (OH) groups which combine with the corresponding haptophore groups of the parasites. Tartaric acid also contains (OH) groups which may act in the same way. Hence, according to Tsuzuki, the action of these antimonial compounds may be explained on the basis of Ehrlich's side-chain theory.

After experimenting with several compounds on rabbits inoculated with syphilis, Tsuzuki found that the best results were obtained with a combination of antimony oxide with potassium bitartrate and ammonium—$SbO(C_4H_4O_6)_2\text{-}K(NH_4)_2H_2O$—to which he gave the name of "antiluetin." This substance was then tried in human with remarkable results.

Details of 10 cases are reported, including primary, secondary, gummatous, and cerebral syphilis, in all of which the symptoms were greatly improved or disappeared. In several cases a cure was obtained with antiluetin after energetic treatment with mercury and iodide had failed, and one case of gumma which recurred after salvarsan was treated by antiluetin. In a case of syphilitic optic atrophy the sight was improved. The drug is given by subcutaneous injection between the shoulders. The initial dose is 0.025 gramme, soon increased to 0.06 gramme, given daily or every other day until a total of 0.15 to 0.3 gramme has been reached. If this is well borne, a further series is given. The dose required for therapia sterilisans magna is estimated at 0.75 gramme.

Tsuzuki concludes that antiluetin is a powerful antisyphilitic remedy, but that the best results are obtained when it is combined with mercury and iodides. Further experience with this new remedy will be

awaited with interest, for since antimony is less toxic than arsenic, it is not impossible that salvarsan may be dethroned by anti luetin.—British Medical Journal.

Psychiatric Anarchy.

The above is the title of an address delivered by Dr. Arnaud, as President, to the Congress of French Alienists and Neurologists last year (L'Enceph., August 1913, p. 107). It may be taken as expressing the views of Frenchmen generally on the recent attempts to improve the classification of mental diseases, chiefly by German writers. He considers that these attempts have not been successful, chiefly because there is a lack of clear thinking about the matters in question. He objects to the indiscriminate rejection of old terms, whose signification has been accepted for many years, and the substitution of new ones, whose definition is continually being changed. Instead of clearing the air it has added a fog of contradictory and unmeaning terms. Each year only adds to the contradiction and confusion. Paranoia, dementia præcox, and manic depressive insanity are rpecially discussed, and strong objections are taken to the new views promulgated regarding these. Complaint is made that almost as soon as criticisms are made on ihe latest ideas put forward, these are superseded by still later ones. Dr. Arnaud does not agree that these efforts have resulted in any real advance in nosology, but he readily admits that they have had a very stimulating effect. They have caused a remarkable output of work; they have induced much serious reflection, especially about cases hitherto regarded as uninteresting; they have subjected old symptoms to scrutiny from a new angle; and by all these effects hove marked an epoch in the study of mental medicine. With these views there are undoubtedly many in this country who will agree.—Edinburgh Medical Journal.

Action for Compensation---Practicing in Another State---Authority of Wife to Employ---Amount of Compensation.

A physician executed a mortgage which was assigned to a personal friend, who died a bankrupt. The trustee in bankruptcy sued to foreclose the mortgage, which had been reduced by payments to $2,000. The physician set up a counterclaim for $2,500 for medical services rendered to the deceased bankrupt in his last illness. The plaintiff orgued that the services in question were rendered as a friend, and not for compensation. The deceased bankrupt was a lawyer, practicing in the State of New York. He attempted to commit suicide in a hotel in Newark, N. J., and was removed to the Newark City Hospital. His wife was communicated with and started from New York to Newark by automobile. On the way she requested her brother, who accompanied her, to get out and telephone to the defendant, who had rendered professional service to herself and husband for many years, and to ask him to come over to the hospital where her husband was. The defendant came the same afternoon, which was Sunday, and remained in constant attendance upon the patient until Thursday evening. He then was absent from the hospital until Friday morning, and remained until Friday night, when he finally left, having given up hope. The patient died Saturday morning. When the deceased was first taken to the hospital, which was a public hospital, treating patients without pay, he was put in a ward with other patients; but after the defendant's arrival he was transferred to a room reserved for special cases. While the rules of the hospital did not permit the defendant formally to take charge of the case, the hospital physicians and surgeons extended to him every courtesy, and all the freedom which the rules of the hospital permitted. He was in constant attendance at the bedside of the patient, and his suggestions as to treatment were complied with, and he administered some treatment himself. At his suggestion an operation ror transfusion of blood was performed.

It was held that the evidence did not warrant the inference that the defendant rendered his services as a friend, and not for compensation. He had been the deceased's physician for years. It was also true that he had been an intimate friend of the deceased. While that circumstance might have had the effect of rendering his professional services to his friend more assiduous than they might otherwise have been, it manifestly did not change the character of the services. The failure of the defendant to make any charge on his books for this service and to render a bill therefor had no particular significance, because he knew that the estate was bankrupt, and, as he explained, he did not until afterwards understand that he was entitled to make a charge for his services as a counterclaim to the mortgage.

It was held that the wife had authority to employ the defendant. The case was a critical one. If the patient's life was to be saved, the unremitting attention of a skilled physician was called for; and such attention could not, in the nature of things, be received from the hospital physicians, there being 300 and 400 patients in the hospital at the time.

The plaintiff also argued that, although a licensed physician of another State not licensed in New Jersey may act as a physician or surgeon in that State if he desires without rendering himself subject to punishment, yet he may not recover fees for such service. The court was of the opinion that the New Jersey statute was not intended to prevent the recovery of compensation for medical services rendered under the circumstances proved. Section 23 of the statute (3 Comp. St., N. J., 1910, p. 3328) provides: "That nothing in this act shall be so construed as to prevent any physician or surgeon in good standing and legally qualified to practice medicine or surgery in the State in which he or she resides, from practicing in this State, but all persons opening any office, or appointing any place where he or she may meet patients, or receive calls shall be deemed a sojourner in this State, and shall conform to the first section os this act." The court construed this section, along with section 36, providing for certain exemptions, as meaning that only those who either reside or sojourn in the State of New Jersey are subject to the requirements of the act. In any event, it held thot the case might, if necessary, be decided irrespective of the New Jersey statute. The parties were all residents of the State of New York, the contract was made in that State and the action was brought in that State.

The court held that the defendant should be compensated rather upon the scale of charges for services of a family physician than the much higher scale of services of an operating surgeon. He performed no operation. On consideration of the widely varying testimony of the medical experts and the facts of the case, the compensation was fixed at the sum of $750.—Prentice v. Ladinski, N. Y.

Unguentum Glycerini.

A combination of glycerine and starch has found a measure of acceptance as a therapeutic agent in certain diseased states of the skin, and while easily applied and having no tendency to dry up or become rancid, it has not wholly fulfilled its early promise. The very various proportions of starch and glycerine met with in different pharmacopœias prove this, since the percentage of glycerine in these formulæ oscillates between 57 and 90. A much more preferable ingredient than starch is now available (Arbeiten aus Dr. Unna's Klinik fur Hautkrankheiten in Hamburg, 1910-1913. Berlin, 1913)—this is eucerin anhydricum, a mixture of two parts of oxycholesterin, extracted from wool-fat, and ninety-eight of unguentum paraffini. This takes up glycerine in almost unlimited proportion. The best combination according to Unna consists of

Eucerini anhydrici	20.0 per cent.
Glycerini	80.0 " "

In preparing, the eucerin should first be rubbed up in a mortar till it froths and then the glycerine added drop by drop. This results in the production of a veritable glycerine ointment, a feat never previously accomplished. This unites the properties of glycerine and fat and so possesses a much wider range of applicability than glycerine of starch has. It can likewise be used with advantage to the scalp as a pomade as well as to the smooth skin. It can be combined with other ointments and pastes easily and freely in all proportions. It can be employed with the greatest benefit by surgeons and their assistants or others to obviate the roughness and tendency to hack or fissure as a consequence of the rigorous demands of antisepsis. If the hands, dried after washing, are smeared with a minute quantity of this unguentum glycerini, it imparts to the epidermis a pleasant smoothness but no stickiness, and if regularly used preserves the skin from chapping.—Edinburgh Medical Journal,

The Treatment of Lupus Erythematosus by Carbonic Snow.

Haslund (Ann. de dermat. et de syph.) contributes his experience on this subject during two years at the Finsen Institute, where the employment of carbonic snow has for the time replaced that of phototherapy, as being much speedier, The effect of this snow in lupus erythematosus is to produce a marked necrosis of the superficial layers of the skin, with partial obliteration of the vessels, closely followed by a reactive inflammatory process. Eighty cases have been treated with the snow, and of these five are reproduced in detail. No aggravation of the disease has been met with, as sometimes happens with phototherapy. While no treatment can absolutely obviate recurrences, up to the present none have appeared where the lesions had been cured and cicatrized as the result of the freezing, while the scarring was as perfect as after successful application of the Finsen method. The degree of pressure to be exercised in using the snow no doubt varies a little. While all persons do not react alike, in children and in those with delicate skins reaction may be pretty severe. Again, the several forms under which lupus erythematosus manifests itself react differently. In the purely hyperæmic types, where there is a pronounced œdematons infiltration, it seems particularly difficult to obtain a markedly

bullous reaction. Here he advises to freeze quite early with relatively firm pressure and long exposures. The applications often need repetition more frequently than one would anticipate from the seemingly benign aspect. In the thicker, more infiltrated kinds, it is advantageous to remove by means of ointment or plaster the thick scaly covering, prior to using the snow, and to repeat the treatment to any spots which have resisted previous application. In such an obstinate ailment one must not yet express oneself too positively as to certainty of cure by snow treatment. In the typical discoid patches, where there are adherent scales attached firmly to the follicles, and exhibiting a tendency to atrophy, scarring will be more pronounced than in the purely hyperæmic instances. He has the impression that this is not due to the influence of cold, even though fairly intense. In preparing the snow for application, tubes of ebonite of various diameters are suitable, and into these the snow is forced by means of a wooden piston. This piston should be longer than the ebonite tube so as to force the snow beyond the end of the tube at the instant of application. The diameter of the tube should not exceed three-quarters of an inch, since if it is greater one cannot easily exert a uniform pressure all over. To avoid encroaching on the same part twice, one can use square tubes, but as the pressure at the periphery of the tube is less than in the centre, the overlapping of the round tubes does no practical harm. Large patches must be dealt with in sections. The amount of pressure should be greater in situations where the subcutaneous adipose tissue is abundant than where the skin is tense over bone. In adults, as a rule, the duration of application is 12 seconds, in children 10. While the reaction may appear at once, in many cases it does not appear till next day, and then with the formation of vesicles or bullæ. If large, these should be punctured. In other cases there is seen a dull grey necrosis or a gelatinous investment. The surface may now be treated by ointments or by compresses soaked in a dilute solution of nitrate of silver. The reaction finally disappears in the course of two or three weeks, when a fresh application of the snow may be made if considered necessary. While the snow treatment is somewhat painful, not much complaint of this is made by those submitted to it. In efficacy it surpasses phototherapy. Its safety and simplicity are in its favor. No doubt there may be recurrences, even after a long time, with this as other methods. To obviate such, the freezing should be at once repeated if the least erythema or infiltration recur.—Edinburgh Medical Journal.

Median Lozenge-Shaped Glossitis of the Dorsal Surface of the Tongue.

Brocq and Pautrier (Ann. de dermat. et de syph.) remark that the pathology of the buccal mucous membrane is often neglected by dermatologists. No doubt there are many gross lesions occurring there which are perfectly known. There is one, however, of a special kind, situated on the dorsal aspect of the tongue, to which their attention has been drawn during some years. Noticed at first by chance, when systematically looked for it has proved to be more frequent than they suspected. After many conjectures they admit that they are totally unable to assign it a precise place in the nosographic category. Without then being able yet to trace its etiology, they desire to publish what they know about it, in the hope that by-and-by its nature may be more exactly determined. The details of sixteen cases are reported, but they believe that they have encountered five or six more. The seat of the affection is remarkably constant; it is found in the centre of the middle part of the dorsum of the tongue. Though it may advance slightly forward, it is always arrested in front of the zone where the calyciform papillæ mark out the lingual V. It is roughly lozenge in shape, with the long axis antero-posterior. The average dimensions are about an inch by three-quarters of an inch. It is well defined against the rest of the mucous surface. The lesion appears planed off as if there had been exfoliation, exposing a smooth, rose-colored surface, on which are sometimes seen opaline points or patches, as if such were the commencement of superficial sclerosis. Or there are small, soft, globular elevations either scattered over or aggregated together. To touch it imparts a faint sensation of induration. It is quite painless, hence it may have only been noticed by chance, or has not been thought of such consequence as to necessitate advice. It is of long duration, yet the patient cannot state how long it has existed. It appears to be very rebellious to treatment. Nothing which they have tried has produced any change. But it must be observed that treatment has not been systematically carried out. The medication causing trouble, it was neglected, since the lesion occasioned no inconvenience. As to causation, nothing definite has been made out. It has been met with in syphilitic persons and in others free from the taint. Some smoked heavily, others not at all. Its histology is distinct from tuberculosis or mycotic affections. It is possible to show what it is not, but they are incapable of declaring what it is. The article is well illustrated. —Edinburgh Medical Journal.

(*Continued from Page 389*)

the part of local physicians and undertakers, under the new vital statistics law enacted by the last legislature which took effect October 1st, 1913. It is of interest to note that some of the most flagrant offenders in the medical profession in their failure to report to the vital statistics registrars, are in some of the larger cities of the State. The attorney general has indicated his willingness to institute prosecutions when desired by the Board of Health.

Rev. A. T. Lindsay, President of Linwood College, Gastonia, N. C., has tendered the directors of the recently chartered North Carolina State Orthopædic Hospital a lot of ten acres near Gastonia, N. C., as a site for the proposed hospital.

Dr. W. L. Settlemeyer, of Gaffney, S. C., has recently been appointed by Gov. Cole Blease of that State, a member of the board of trustees of the South Carolina Industrial School at Florence, S. C.

Dr. C. T. Wyche, of Prosperity, S. C., who was Speaker of the last House of Representatives of South Carolina, and it will be recalled was stricken with apoplexy while presiding over the legislative session at Columbia, S. C., during the past winter, has just returned from Florida, and is reported as being much improved in health.

Dr. Lewis A. Griffith, of Columbia, S. C., has just been elected mayor of his home city by a substantial majority in a closely contested election.

Dr. L. B. McBrayer, Superintendent State Tuberculosis Sanitarium at Montrose, N. C., delivered the address at the closing of the High School in Gastonia, N. C., on May 12, choosing for his title "The Value of a Man."

Dr. C. M. Van Poole has opened offices in Salisbury, N. C., for the practice of medicine. Dr. Van Poole is so well known and so closely identified in Salisbury and the vicinity, both socially and professionally, that we feel safe in predicting by this change in his location very profitable and pleasant results for him.

The Annual Address to the graduating class of the Louisburg Female College at Louisburg, N. C., was delivered at the closing exercises on May 28 by a distinguished Carolinian, Dr. J. Allison Hodges, now Professor of Neurology in the Virginia Medical College at Richmond, Va. The subject of the address was "The Conservation of Nerves," and was handled in a masterly and most instructive way.

Plans have been completed and the actual work of construction will shortly begin on the new Catholic Hospital for the City of Charlotte. The central portion it is planned to construct at once will house only 40 patients, but the plan calls for the construction of additional units which, when all completed, will afford space for the care of 100 patients.

At Warrenton, N. C., on May 27, Dr. Cyrus Thompson, member of the North Carolina State Board of Health delivered the annual address to the graduating class of the Warrenton High School.

The Second District Medical Society of North Carolina held its semi-annual session in New Berne, N. C., May 26 under the presidency of Dr. Wm. E. Warren, of Williamston, N. C., Dr. K. P. B. Bonner, secretary. Able papers were presented by Drs. R. L. Payne, Sr., Norfolk, Va., Chas. O'H. Laughinghouse, Greenville, N. C., Jas. M. Parrott, Kinston, N. C., Richard N. Duffy, New Berne, N. C., and others. The social diversions were attractive, the attendance good, and the session a success in every way. The officers were re-elected.

A jury in the Superior Court in session at Lenoir, N. C., rendered a verdict of more than passing interest to the medical profession on May 22, 1914. The case was an action brought by a former patient against Dr. C. B. McNairy, of Lenoir, N. C., recently elected Superintendent State School for Feeble-minded at Kinston, N. C., for damages in amount of $1,000 resulting from the physician in question having reported the plaintiff's name to the Caldwell County (N. C.) Medical Society, its publication in the Society's delinquent list, and the plaintiff's inability to secure medical attention for himself and family from any of the resident physicians of Lenoir, and his being compelled to go to Newton or Gastonia, nearby towns, for medical advice and treatment. The facts as evidenced before the jury appear to have been as follows: In 1909 the plaintiff's name was printed in the delinquent list of the Caldwell County Medical Society as being delinquent for professional services to Dr. C. B. McNairy. McCall, the plaintiff, insisted that he had paid the amount of the account, as alleged being due Dr. McNairy, to another physician, and it was so testified by the other physician. Dr. McNairy denied such settlement or pay-

ment of the bill, and insisted on the production of a receipt from himself or an authorization for payment to another physician, but the plaintiff was unable to produce such receipt or authorization. The plaintiff had also demanded that the county medical society cease publication of his name on the delinquent list, which the society had declined to do. After this the suit was brought against Dr. McNairy. At the trial no written agreement was submitted showing the published delinquent list was to be binding on the members of the medical society, but it appeared that professional attendance upon such delinquents was to be optional with each physician, and no person suffer for lack of medical attention because of the failure of the head of any family to pay for professional services. The jury considered the case more thaa two hours, but it was learned it stood from the beginning 11 to 1 for the defendant, and the verdict as rendered was in favor of the defendant physician and against the plaintiff in all particulars.

Dr. W. W. Earley, of Marietta, Robeson county, N. C., has been appointed U. S. Consul to Leicester, England.

Dr. John A. Ferrall, Secretary of the North Carolina State Medical Society, and late Director of the Hook-worm work of the North Carolina State Board of Health, more recently succeeding Dr. Wyckliffe Rose, of Washington, D. C., as General Director of the National Sanitary Commission, commonly known as the Rockefeller Hookworm work in America, with headquarters in Washington, D. C., delivered an address to the graduating class of the Medical College of Virginia at the finals on June 1st, 1914. The address was entitled "Health Work as a Career," and was a wise and masterful presentation of the modern concept of the best thought upon this vital topic.

Dr. Southgate Leigh, of Norfolk, Va., (a city whose citizenship is so largely made up of North Carolinians, and geographically so close also) has been appointed by Gov. Stuart Mann member of the Virginia State Board of Medical Examiners succeeding to the vacancy caused by the removal of Dr. Herbert Old from Norfolk to Philadelphia. We congratulate the Governor on his wise selection which is not only a merited compliment to one of the South's leading surgeons, but a compliment to the Virginia Governors' appreciation of a fine capable gentleman.

Dr. P. J. Macon, of Warrenton, N. C., one of the leading medical practitioners of Warren county, N. C., has been nominated by the Democrats as representative of the county in the next legislature.

Dr. H. E. Bowman, of Biscoe, N. C., has removed to Aberdeen, N. C.

Dr. C. A. Shore, of Raleigh, N. C., and Miss Ellen Dortch were married on Wednesday evening, May 27th, at Christ Episcopal Church. The wedding was very beautiful and in perfect taste. After the wedding trip, Dr. and Mrs. Shore will make their home in Raleigh where he is Director of the State Laboratory of Hygiene. Originally Dr. Shore was from Winston-Salem but for many years he has lived in Raleigh and has always taken an active part in the social life of the city. Mrs. Shore is the daughter of the late I. F. and Lucy Hogg Dortch, of Goldsboro, and the niece of Miss Sallie Hogg, of Raleigh, with whom she has lived for a number of years.

Dr. Geo. Ben. Johnston, of Richmond, Virginia, has been appointed by Governor Stuart a member of the Board of Visitors of the Medical College of Virginia. He has accepted and at the close of the recent session retired from the faculty of the College, the tenure of office being for life and not permitting retention of a position as teacher in the College. The presence of this distinguished surgeon on the board can but further help to promote the many advancements being made in this excellent school.

At the North Carolina Medical College Commencement in the auditorium of Queen's College on the night of June 1st, twenty-six young physicians received their diplomas. These graduating exercises mark the close of what has been the most successful year in the history of this institution. Dr. E. W. Pressly, of Clover, S. C., delivered the principal address of the evening. It was well received and considered by every one to be a most elegant address. Several of the young graduates received very high grades, the first honor went to Dr. J. H. Caldwell of Winnsboro, S. C., who graduated with a general average of 94.4.

The hospital appointments were announced as follows: R. H. Hardin and C. L. Sherrill, the latter of Catawba, to Stetson Hospital, Philadelphia; G. C. Wingate of Charlotte to the Rutherrord Hospital, Rutherfordton; I. E. Shafer of Gold Hill to the Williamsburg Hospital, Brooklyn, N. Y.; H. W. Corbett of Mayesville, S. C., and G. G. Suarr of Lebanon Church, Va., to the

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Franklin Square Hospital, Baltimore; and Dr. H. W. Tidmarsh of Whitmire, S. C., to the James Sprunt Memorial Hospital, Wilmington, and the New York Lying-In Hospital. Dr. J. P. Munroe acted as master of ceremonies and Rev. Dr. W. E. McIlwaine made the invocation.

The new graduates are as follows: Oscar Reed Black, William Law Orr, James Lock Bowles, Herman L. Price, Pressley Robinson Brown, Irving Everett Shafer, Claudius Franklin Bulluck, Coite Long Sherrill, Joseph Henderson Caldwell, George Marvin Smith, Hawkins Whitworth Corbett, George Grover Snarr, Med Emmett Ellis, Silas Raymond Thompson, Lawrence Merrill Fetner, Henry Walter Tidmarsh, Ronda Horton Hardin, William Romulus Triplett, Thomson Lex Helmes, Newton Graves Wilson, Marcus Calvin Houser, George C. Wingate, Oscar Julian Houser, John Armstead Winstead, Roland McNair Lancaster, George Lee Withers, John Frederick Nash, Charles Luther York.

The faculty is now composed of the following well known medical men: J. P. Munroe, M.D., president; Andrew J. Crowell, M.D., secretary and treasurer; W. O. Nisbet, M.D., dean; R. H. Lafferty, registrar; I. W. Faison, M.D., B. C. Nalle, M.D., R. L. Gibbon, M.D., G. W. Pressly, M.D., J. P. Mathewson, M.D., A. M. Whisnant, M.D., W. D. Witherbee, M.D., C. M. Strong, M.D., Otho B. Ross, M.D., C. N. Peeler, M.D., L. B. Newell, M.D., J. C. Montgomery, M.D., R. F. Leinbach, M.D., Addison G. Brenizer, M.D., J. K. Ross, M.D., P. M. King, M.D., A. C. Misenheimer, M.D., F. L. Black, attorney, J. W. Squires, M.D., H. W. McKay, M.D., John Donnelly, M.D., Yates W. Faison, M.D., Oren Moore, M.D., S. M. Crowell, M.D., C. S. McLaughlin, M.D., Henry Norris, M.D.

More than 500 citizens of Wilmington, N. C., held a mass meeting on June 2nd and adopted resolutions demanding that the city council reconsider its vote whereby a smaller sum was appropriated for the conduct of the city health department than had been agreed upon by the municipal health officer and the county commissioners and recommended by them to the council for its allowing. The meeting appointed a committee to have charge of the matter and in the event the council refuses to make the appropriation desired, the committee is authorized to proceed to take such action in the courts as may be needful to secure the full appropriation for the health work of the city as desired.

The Mercy General Hospital, of Durham, N. C., has asked of the city council the monthly donation of $200, alleging its equal right to receive as much assistance from the municipal treasury as Watts Hospital.

Mr. and Mrs. T. P. Ingle, of Asheville, secured a judgment of $50 against the Western North Carolina Fair Association for the failure of the association to award their infant a medal in the recent "better babies contest" held under tee auspices of the association. A number of witnesses, including several well known Asheville physicians, were summoned at the trial.

Dr. R. H. Lewis, of Raleigh, N. C., a member of the State Board of Health and one of the State's most distinguished physicians, after a service of more than thirty as a trustee of the State University, and for a large portion of that time the Board's Secretary, has tendered his resignation as Secretary of the Board of Trustees of the University to Gov. Locke Craig. In accepting the resignation Gov. Craig pays Dr. Lewis a merited compliment in the following words:

The University has never had a more loyal or more useful friend than Doctor Lewis. Without reserve he has devoted to his alma mater his time, his money, and his great ability. He was a trustee when I was a student in the University and has been one ever since. The institution could always rely not only upon his loyalty, but upon ths wisdom of his judgment in all difficult situations. The trustees and the people of North Carolina deeply regret that his physical condition is such that he has not been able to attend the meetings of the board, and will not be able to attend the approaching meeting, but they rejoice at the prospect of his early recovery. He was one of the men that was most active in the reorganization of the University in 1875. He is known and loved by all the students that have been to the University since then, for he was always in attendance upon the meeting of the trustees at the commencements.

Isaac E. Emmerson, who in the years gone by was a modest country druggist of Chapel Hill, N. C., later acquiring wealth from the sale of Bromo-Seltzer, has donated $25,000 to the University of North Carolina for the erection of an athletic stadium.

Medical Association of Georgia.

The sixty-fifth annual meeting of this association, which was held in Atlanta, was one of the largest and most successful ever

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held by the organization. Officers for the ensuing year were elected as follows: Dr. W. B. Hardman, of Commerce, president; Dr. H. J. Williams, of Macon, first vice-president; Dr. S. D. Patterson, of Cuthbert, second vice-president; Dr. W. C. Lyle, of Augusta, secretary and treasurer; Dr. E. C. Davis, of Atlanta, delegate to the national convention in Atlantic City in June.

Meeting of the American Medical Editor's Association.

On June 22nd, 9 a. m., the above mentioned association will meet at the Marlborough-Blenheim Hotel, Atlantic City, N. J., under the Presidency of Dr. E. A. VanderVeer, of Albany, N. Y. An unusually attractive programme is being prepared. Among the papers are the following:

President's Address: E. A. VanderVeer, M.D., Albany, N. Y.

"Relation of the Medical Press to the Cancer Problem," by Mr. Fred'k L. Hoffman, Statistician of the Prudential Insurance Co., Newark, N. J., (by invitation).

"The Things that Count in Medical Practice," by H. Edwin Lewis, M.D., New York.

"Ideal National Medical Journal: What it Should Be and What it Should Not Be," by W. J. Robinson, M.D., New York.

"Two Problems of the Organization Journal: The Mediocre Paper and the Editorial Department," by Sarah M. Hobson, M.D., Chicago, Ill.

"Medical Journalism as a Local and as a National Proposition," by Thomas S. Blair, M.D., Harrisburg, Pa.

"Medical Books and Journals," by T. D. Crothers, M.D., Hartford, Conn.

"The Medical Periodical and the Scientific Society," by F. H. Garrison, M.D., Washington, D. C.

"Editorial Experiences," by A. L. Benedict, M.D., Buffalo, N. Y.

"The Special Medical Journal," by A. Bassler, M.D., New York.

"The Medical Profession and Its Influence From a Buying Standpoint," by Joseph MacDonald, Jr., M.D., New York.

"The Preparation of the Original Article and the Editors' Latitude," by E. Franklin Smith, M.D., New York.

"He Among You Who Is Without Sin Shall Cast the First Stone," by Erwin Reissmann, M.D., Newark.

Recent Research in Psoriasis.

Under this heading there appeared in the February number of this Journal a resume of observations made by Schamberg and others. Tidy (Brit. Journ. Dermat.) while acknowledging the care and labor expended on their valuable and interesting analyses, criticises their conclusions. He divides his remarks into three heads: (1) Are the results obtained peculiar to psoriasis? . In reply, he is of opinion that the retention of nitrogen found by the authors referred to is not peculiar to that disease. On the contrary, the "retention" occurs in all conditions in which the skin is widely affected by inflammatory or proliferative processes. Of such, one may take as an example pemphigus foliaceus. (2) What is the explanation of the apparent retention of nitrogen? If stored up in the substance of the skin, great increase in its thickness must have been noticeable, yet this did not happen. It is most improbable that there could be some abnormal form of excretion apart from the skin. Tidy believes that the observed retention of nitrogen is apparent and not real, and is accounted for by loss from the affected skin. (3) Does the retention of nitrogen continue in cases of psoriasis after scaling has ceased? Since it is extremely difficult to establish nitrogenous equilibrium in man, it is impossible to draw conclusions from small retentions of nitrogen, and the inference is legitimate that there is no evidence of retention of nitrogen in psoriasis after the disappearance of the eruption. On the very low protein diet which the authors employed in some instances, often combined with low caloric value, the metabolism must be influenced by two factors, namely, the presence of psoriasis, and the conditions of partial starvation.—Edinburgh Medical Journal.

Reaction of Abderhalden in the Diagnosis of Pregnancy.—Sabin (Presse med.) says that the principle of the Abderhalden test depends on a humoral modification in the pregnant woman, consisting in the formation of proteolytic ferments. They are believed to be due to the appearance in the circulation of the pregnant woman of chorionic cells. The proteolytic ferment is found in the first growth of the placental tissue; it also occurs when the ovum is abnormally placed, and continues in all remnants of living placental tissue. The method of making the test is described and the extreme care that must be taken in washing and preparing the placental tissues for the test. Only the work of an experienced operator can be considered authoritative. He has tested seventy-two specimens of serum: in forty-three cases the reaction was positive, and in thirty-nine the result was confirmed by the presence of the signs of pregnancy. The women examined all had a retardation of menstruation of from eight

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to forty days. In the four doubtful results pregnancy had advanced to more than eight months. In sixteen cases the results were negative, and were confirmed by the absence of the signs and symptoms of pregnancy. Three of them were tuberculous, one syphilitic, one had a retroverted fibroma. In a woman pregnant four months with severe vomiting the reaction was negative. In abortion with placental remains in utero there was a positive reaction in three women, under eight days from rupture of the ovum; in four after fifteen days the test was negative. The author believes that when the test is more accurately applied and with greater experience it will be found of increasing value in the diagnosis of pregnancy.

The Occurrence of Tubercle Bacilli in the Faeces.—Laird, Kite, and Stewart (Journal of Experimental Medicine) give the following conclusions: Acid-fast bacilli have not often been found in the fæces of healthy persons; they have frequently been found in the stools of tuberculous individuals, and when present they are usually to be regarded as true tubercle bacilli. According to some authorities, bacilli are found in the fæces only in cases in which tubercle bacilli have been present also in the sputum. Others report their presence in the fæces not only when they have not been found in the sputum, but even when there has been no sputum to examine. Others, again, hold that the examination of the fæces should be of greater value than the examination of the sputum. The authors, after prolonged investigations, conclude that nearly all patients with tubercle bacilli in their sputum have also virulent tubercle bacilli in their fæces, as proved by animal inoculation; and further, that very few individuals whose sputum does not contain tubercle bacilli have acid-fast baccilli in their fæces.

The Chemistry of the Leucocytozoon Syphilidis and of the Host's Protecting Cells.—McDonagh and Wallis (Biochemical Journal) discuss at considerable length the biochemistry of the bodies which they have met with in the cells of the host in cases of syphilis, and which they consider to be a phase in the life-history of the causative organism. Important deductions, all supporting the view that the bodies seen are really parasitic and not degeneration products, have been drawn from the appearances presented in the affected cells, and in other cells, by staining with various dyes, the staining or otherwise by the various dyes employed being indicative of the chemical constitution of the cell or part of a cell affected. They have found aqueous solutions of borax-methylene blue and of brilliant blue to be the best dyes for in vivo staining of the parasites.

The June Woman's Home Companion.

In the June Woman's Home Companion appear a number of letters and one or two articles containing valuable vacation ideas and suggestions. Among the titles of special interest in this connection are: "Ways and Means of Taking a Vacation"—a collection of letters from various contributors; "Two Foreign Lands in Two Weeks," in which Albert Lee makes a practical suggestion of a trip to St. Pierre on the islands of Miquelon and to Nova Scotia—a trip which can be made by two people in two weeks at a total expense of $124.60; "Ideas for Summer Girls," by Companion readers; and "The Best Nature Books," in which Laura Spencer Portor makes suggestions for reading for June.

Of course many other articles are included in the number, such, for example, as "To the Girl Who Wants to Sing," in which Putnam Griswold tells why so many girls fail, who is to blame, what kind of talent is really needed, and where to study to win success; "The World's Greatest Paintings," by Laura Spencer Portor; "The Friends of 'Better Babies'," by Anna Steese Richardson; and "The Safe Ice Box," by Walter Peet, a physician.

Fiction is contributed by Mary Heaton Vorse, Molly Elliot Seawell, Fannie Heaslip Lea, Temple Bailey, Georgia Wood Pangborn, Clarice Vallette McCauley and Margarita Spalding Gerry.

The regular Fashion, Cooking, Housekeeping, Home Decoration, Puzzle, Tower Room, Young People's, and About People departments complete a fresh and attractive number.

The Henry James Portrait.

The John Sargent portrait of Henry James, which was slashed and virtually ruined with a hatchet in the hands of a militant at the Royal Academy Exhibition on May 4, will be reproduced in an early number of The Century Magazine. A cable from London says that Mr. Sargent has always objected to reproductions of his work, but he has in recent years made exceptions in favor of The Century, which has utilized all the skill of its staff of engravers in order to secure adequate reproductions of the great American painter's work.

Pass Alaska Lease Bill!

It has been definitely decided, as our readers are aware, to develop Alaska by the construction of a governmental railroad about a thousand miles long. This will penetrate what is for the most part a pathless wilderness; but rich agricultural territory will be opened up, and great coal-fields will be tapped, while various other resources will be rendered available. Secretary Lane has worked out an Alaskan policy that reconciles the differences of the past and solves various problems in a statesmanlike way. In necessary association with the railroad policy is the pending bill for the leasing of coal lands and the regulation of the resources that should be developed rapidly with the construction of the railway. Secretary Lane has secured the best obtainable experts to spend the present summer locating the route of the road. The Government intends to proceed in Alaska as efficiently and honorably as it has performed the Panama task. Long preliminary study on the part of Congress committees, conservation congresses, and various interests, public and private, has led up to the solutions provided in the legislation now pending. Congress ought not to adjourn without passing the Alaskan leasing bills.—From "The Progress of the World" in the American Review of Reviews for June.

Massive Collapse of the Lungs Following Abdominal Operations.

Elliot, in The London Medical Lancet, says that in the Bradshaw lecture of 1908 W. Pasteur discussed the nature of massive lobar collapse of the lungs, as contrasted with the scattered lobular collapse that occurs passively when the bronchioles are obstruclod by secretion and the alveoli are slowly emptied by absorption of their air into the circulating blood. The authors report eleven cases of postoperative collapse which agreed closely with Pasteur's description. One feature he laid little stress on—and this feature the authors regard as critical. All had mucopurulent expectoration and fever, 101° to 103° F., preceding the collapse. There is no reason why fever should develop in a simply nonseptic case with reflex inhibition and "active collapse." This fever, which makes the resemblance to pneumonia all the closer, is caused by a purulent brouchitis perhaps determined by a preceding infection of the air tubes. Together with this,some unknown cause,either thoracic or abbominal, produces a reflex immobility of the diaphragm aud as the combined result of these two disorders of respiration the lower lobe of the lung undergoes passive collapse throughout its mass. This may occur at any time in the first week after the operation. Since the volume of the collapsed lung is much reduced, movements occur to restore the balance of intrapleural pressures and the heart is displacsd to the affected side, while the contralateral lung is overdistended. Pain and cyanosis develop when the displacement is rapid and extreme. At first there are immobility, a dullness of percussion note, and a weakness of beeath sounds on the collapsed side, whereas the other may be so hyperresonant as to resemble the state of pneumothorax. Later, as the bronchial airway opens up, the breath sounds become tubular with egophony aud whispering pectoriloquy. All the signs vanish in two or three days if the right diagnosis is made and active treatment is adopted. Otherwise the collapse may persist,the infection may spread through the lung, and pleurisy or true pneumonic consolidation develops as a complication. The chief criteria are fever, the greenish mucopurulent sputum, and the displacement of the heart. These together give the distinction from pneumonia or pulmonary embolism, the latter disaster being in the worst cases suggested by the acute onset of pain and cyauosis. The aim of treatment is to open up the lung before the infection spreads into its substance. Expectorants are given with potassium iodide, the patient is encouraged to make full inspiratory efforts, especially of an abdominal type, and if possible for five minutes every hour despite pain that may be felt from the abdominal stitches. If the abdomen has been tightly bandaged this impediment to breathing should be slackened. It is conceivable that the worst cases of cyanosis and pain might be relieved by an intrapleural injection of oxygen, in order to restore the balance of volume and push back the displaced heart and the overdistended lung. Fortunately these urgent condisions are rare, and the authors have had no occasion to try this method since the pofsibility of such a line os treatment occurred to them.

Osteoperiostitis of Upper End of Femur.

Fairbank reports the case of a girl, aged five years, who was brought to the outpatient deyartment of the Great Ormond Street Hospital in July last with a history of wasting and pain in the right leg. Nothing definite could be made out at first, On subsequent visits complaint was again made of pain in the leg. This pain occurred particularly when the child got up in the morning. Tenderness in the abductor region waf noticed, but no swelling or thickening of the femur. In September a skiagram showed a thickening of the upper part of the shaft and neck of the femur. The thickening now present could then be felt in the region of the lesser trochanter. When asked to point to the site of the pain the child always pointed to the inner part of Scarpa's triangle. The child limped slightly. She was admitted to the hospital for rest and investigation. Beyond the thickening and tenderness at the upper part of the femur nothing could be made out. There were no signs of disease elsewhere. The right hip-joint seemed to be normal. No history of specific disease could be obtained and the Wassermann reaction gave a negative result. Mercury and iodides were given without effect. The temperature was never above 99° F. So long as the child was in bed she was free from pain, but as soon as she was allowed to get about again she complaiued of the pain. He past history contained the facts that she had "bleeding piles" a few months previously and lost much blood, and that she had pneumonia four years previously. The skiagrams suggested an inflammatory lesion, not a new growth. The case is reported on account of the obscurity of the cause. It is suggested that an operation shonld be performed with the object of cutting a deep groove in the affected portion of bone.—The Royal Society of Medicine Proceedings.

Relation of the Leucocytic Bacteriolysin to Body Fluids.

An extract of horse leucocytes is strongly bactericidal when dissolved in distilled water; it has considerable bactericidal power when dissolved in physiologic saline; but it loses its bactericidal properties when mixed with blood serum or with normal or pathologic tissue ffuids.

About half the antibactericinal action of blood serum is due to the serum colloids, about a quarter to the normal serum crystalloids, and a quarter to the diffusible alkalies. Diffusible acids have no antibactericidal acids.

The addition of boric acid to an inactive mixture of leucocytic extract and serum or other body fluid occasionally restores part of the original bactericidal power, but never more than a small fraction of that power. —Manwaring, in the Journal of Experimental Medicine.

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Use of Pituitrin in Spontaneous or Operative Hemorrhage in the Respiratory Passages.

The author has become convinced that pituitrin is of considerable value in hemorrhage in the respiratory passages, both as prophylactic and for curative purposes. The drug was used in nine cases of hemorrhage after inferior turbinectomy, uni- or bi-lateral; in two similar cases as prophylactic, and also in five cases of epistaxis, in hemoptysis, and in purpura hemorrhagica. A single injection of 8 minims (0.5 c.c.) nearly always brought about arrest of moderate hemorrhage in average cases within ten or fifteen minutes. Where the first injection fails, a second subcutaneous, and later, if necessary, a third intramuscular, injection may be given. For preventive purposes the author has found it advantageous in intranasal operations to administer an injection of 8 minims (0.5 c.c.) fifteen minutes before the operation. The resulting hemostasis and vascular hypertension persist for about twenty-four hours.—Citelli, The Zeitschrift fur Laryngologie, Rhinologie, und ihre Grenzegebiete.

An Authority on Books and Reading Outlines a Fine Vacation Plan for Girls and Boys in the June St. Nicholas.

This month I'm going to answer a letter received from one of my readers who lives in San Francisco. Her idea seems to me so good that I thought more of you might be interested in doing what she wants to do; anyway, I hope you will be, for I'm sure you will get a great deal of pleasure and profit out of it if you are.

In the first place, I'll give you her letter, and then I'll try to give you a few hints on the subject of her inquiries.

"My Dear Miss Hawthorne:—Having been a reader of St. Nicholas for several years, and especially of your 'Books and Reading,' I am taking the liberty of asking your help in forming a reading club for girls about my own age, from sixteen to eighteen.

"My plan is to have a little club that will at once hold the girls' interest and be useful in stimulating a desire to know really good literature.

"My difficulty (or I imagine it will be a difficulty) is that girls of that age are not apt to care about good books unless they are made especially attractive to them.

"Could you give my friends and me a few suggestions in regard to such a club, and what authors it would be best to begin with? I would not trouble you, but I feel that such a club would be of great benefit to us. Yours very sincerely,

"Grace M. Linden."

Epinephrin in Whooping-Cough.

Report of a case illustrating the good effects of epinephrin in whooping-cough, as first advocated by G. V. Fletcher. The case was that of a delicate child of 7 years in whom pertussis was complicated with bronchitis, which was becoming more and more severe. The child had been ill for six weeks when the author began with the administration by mouth of 3 minims of 1:1000 epinephrin solution every four hours. Almost immediately a marked diminution in the severity and frequency of the paroxysms was noted. The author was soon able to limit the administration of the drug to three times a day, and continued it thus for three weeks, at the end of which time the child had completely recovered from the cough, and had steadily improved otherwise, there being a total disappearance of the anemia and wasting produced by the persistent vomiting.—Lord, in the British Medical Journal.

Infection of the Hypophysis by Way of the Sphenoid Sinuses.

The author presents a specimen of sella turcica which he had found filled with seropurulent fluid. The pituitary fossa communicated through a large perforation with the sphenoid sinus, which was likewise infected. The hypophysis itself was relatively but little affected, showing merely a slight degree of inflammation. This was due, on the one hand, to the fact that tissue resistance in the pituitary is rather marked, and, on the other, to the nature of the orifice of communication, which appeared to represent a persisting congenital abnormal opening. Another similar large opening was present in the posterior wall of the sella. This observation shows the possibility of infection of the hypophysis by a route hitherto but little or not at all recognized.—Leri, in the Societe de Neurologie.

The Surgical Treatment of Tuberculous Pleuritic Exudates.—Spengler and Sauerbruch (Muench. med. Wochenschr.) say that it has long been noted that the occurrence of a pleuritic exudate is followed by a marked improvement in the underlying tuberculous process. This is only in part due to the mechanical compression of the diseased lung; in part, the absorption of certain elements of the pleuritic fluid appears to lead to the increased production of immune bodies. The treatment of such exudates depends primarily upon the condition of the lung. If the pulmonary tuberculosis is incipient and localized in one apex or one hilus, and if the amount of fluid is not excessive, it is best to leave the exudate alone. In all cases of advanced tuberculosis, however, especially those in themselves suitable for artificial pneumothorax, the fluid should be partially evacuated and replaced by injected nitrogen gas.

Ovarian Function in Basedow's Disease.

Report based on the ovary predisposes to the production of Basedow's disease. The physiologic climacteric may be considered to predispose to this affection. In 5 cases the menstruation before the manifestations of the affection, as well as in the first few months after its appearance, was regular. Entire cessation of the menses at the onset of the affection was noted in 10 cases. A connection between the severity of the cases and the cessation of the menses at the beginning of the disease cannot be established, but cases in which the menstrual flow has either ceased for a long time or in which the amenorrhea is interrupted by rare and scanty menstruations must invariably be classified among the grave ones. The treatment must be directed to-

ward increase of the ovarian function. Frank, Gynakologische Rundschau.

Glucose Injections as Stimulant and Tonic.—Enriquez (Presse M ed.) has employed with success intravenous injection of glucose in conditions of severe infetious or intoxication, inanition, defectiue heart action, etc., in which the serious nature of the condition is indicated by the decreased output of urine. Injections of 250 or 300 c c. are made into a vein at the elbow, an hour being taken to inject this amount. Fifty patients were so treated, some receiving two or three such injections daily, and several receiving as many as thirty injections in all. This strongly concentrated solution seemed to be quite harmless, there being in no case any indication of injury of the blood or other damage. The proportion of sugar in the blood keeps within normal range, and only a minute portion of the sugar passes into the urine, and this only for a short time after the injection. There is an increase in the total amount of blood; the blood pressure rises and the output of urine increases. The attraction of fluid out of the tissues is a powerful aid in ridding the system of toxins, bacterial or of other origin, and of poisons, especially accumulated anæsthetics.

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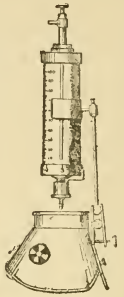

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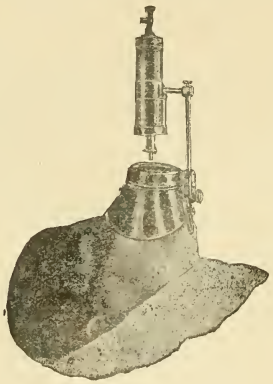

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Table of Contents for Volume Sixty-Nine.

Original Communications

A Comparative Review of the Progress in Clinical Diagnosis During the Past Half Century, by Dr. R. M. Reid, Gastonia, N. C., ... 1

A Peculiar Case, by T. M. McCoy, M.D., Mount Holly, N. C., ... 24

Artificial Feeding of Infants, by L. T. Royster, M.D., Norfolk, Virginia, ... 93

Bacterial Vaccine Therapy, by Dr. Bess Puett, Dallas, N. C., ... 87

Chronic Constipation Caused by Sigmoid Invagination, by Drs. D. W. and Ernest S. Bulluck, Wilmington, N. C., ... 159

Deductions from an Instructive Series of 125 Consecutive Major Operations with no Mortality, by Dr. B. B. Steedly, Spartanburg, S.C. 366

Diagnosis of Duodenal Ulcer, by Henry Norris, M.D., and M. H. Biggs, M.D., Rutherfordton, N. C., ... 12

Diagnosis and Treatment of Genito-Urinary Lithiasis, by. D. Y. Keith, M.D., Louisville, Ky., ... 151

Empyema, with Report of Three Cases in the Same Family at the Same Time, by Foy Roberson, M.D., Durham, N. C., ... 149

Exploratory Surgery for Diagnostic, Prophylactic and Curative Purposes in Occult Intra-Abdominal Conditions, by Stephen Harnsberger, M.D., Catlett, Va., ... 223

Four Months' Experience with Dr. von Ruck's Vaccine Against Tuberculosis, by Roswell E. Flack, M.D., Spray, N. C., ... 362

Gastrostomy: Report of a Case, by Henry Norris, M.D., Rutherfordton, N.C. 148

Hypertrophied Faucial, Pharyngeal and Lingual Tonsils, Their Significance and Treatment, by C. R. Dufour, M.D., Washington, D. C., ... 80

Hemorrhage of the Newborn; A Case, by Hubert Haywood, Jr., M.D., Raleigh, N. C., ... 92

Intubation in Membranous Croup, by S. A. Wilkins, M.D., Dallas, N. C., ... 5

Inguinal Hernia, by W. B. Russell, M.D., Jackson, Tenn., ... 303

Intestinal Auto-Intoxication: Its Etiology with Report of a Case, by J. Rush Shull, M.D., Cliffside, N. C., ... 15

Medical Inspection of Rural School Children, by Roy K. Flannagan, M.D., Richmond, Va., ... 22

Modern View of Cause and Treatment of Diabetes, by C. W. Canan, M.D., Orkney Springs, Va., ... 221

Morphine—The Brain, by J. W. Williams, M.D., Richmond, Va., ... 226

Malignant Intra-Ocular Tumors, by C. R. Dufour, M.D., Washington, D. C., 289

Our Tuberculosis Knowledge, by Mary E. Lapham, M.D., Highlands, N. C., 293

Operative and Non-Operative Acute Mastoiditis, by Archibald C. Lewis, M.D., Memphis, Tenn., ... 298

Pointers on the Treatment of Still Born Babies, by C. W. Hunt, M.D., Brevard, N. C., ... 369

Pathogenesis of Inflammation of the Urethra and Adnexa. A Study Based on a Series of Complement Fixation Tests, by Thos. V. Williamson, M.D., and Samuel W. Budd, M.D.... 370

Pellagra and Pellagra Sine Pellagra. What Is It? by C. G. Roehr, M.D., Fort Pierce, Florida, ... 25

Personal and General Hygiene, by Chilton Thorington, M.D., Montgomery, Ala. ... 79

Report of Interesting Cases, by Dr. John Hill Tucker, Charlotte, N. C., ... 307

Surgical Anesthesia, by Dr. L. A. Crowell, Lincolnton, N. C., ... 4

Surgical Europe and Great Britain, by C. M. Strong, M.D., Charlotte, N. C., ... 19

Simplified Surgical Technic, by Dr. J. A. Faison, Bennettsville, S. C., ... 85

The Medical Man of Yesterday, Today and Tomorrow, by Bittle C. Keister, M.D., Roanoke, Va., ... 6

The Necessity of More Careful Diagnosis in Surgical Cases, by Robert L. Gibbon, M.D., Charlotte, N.C. 11

Two Cases of Injury of the Eye, by Dr. John Hill Tucker, Charlotte, N. C., 18

The Clinical Diagnosis of Nerve Syphilis, by J. Allison Hodges, M.D., Richmond, Virginia, ... 73

The Great American Fraud, Patent Medicines, Quacks, and Guarantee Doctors, by I. W. Surratt, M.D., Sylvatus, Va., ... 74

The Autobiography of a House Fly, by C. B. Bowyer, M.D., Stonega, Va., 76

The New Mental Healing, by Jas. K. Hall, M.D., Richmond, Va., ... 161

The Thyroid Pituitary Gland in Obstetrics, by B. U. Brooks, M.D., West Durham, N. C., ... 158

The Importance of the Eye to the General Practitioner, by W. S. Hodnett, M.D., Danville, Virginia, 157

The Faucial Tonsils, by Dr. John Hill Tucker, Charlotte, N. C., ... 89

Tuberculosis of the Knee, by Dr. Robt. Mann, Memphis, Tennessee, ... 91

The Association of Some Forms of Mental Disease and Inebriety, by W. C. Ashworth, M.D., Greensboro, N. C., ... 217

The Application of the Tuberculin Test to a City's Milk Supply, by Mosby G. Perrow, Ph.D., Lynchburg, Va., ... 296

The More Rational Methods of Treating Aural Diseases, by Dunbar Roy, M.D., Atlanta, Ga., ... 300

The Mother and the Child, From a Public Health Point of View, by C. W. Stiles, Wilmington, N. C., 304

Tri-State Medical Association; President's Address, by Southgate Leigh, M.D., Norfolk, Va., ... 145

Tubercular Kidney, by R. L. Payne, M.D., Norfolk, Virginia, ... 153

Treatment of Lateral Curvature of the Spine, by Jas. K. Young, M.D. ... 361

Uses and Abuses of Forceps, by Dr. Stanley Matthews, Bunkie, La., ... 156

Editorial.

A Legal National Licensing Board, ... 309

Antipyretics, ... 135

Calomel as a Baby Medicine, 99

Delusions, ... 310

Dr. L. B. McBrayer, of Asheville, becomes Director of the N. C. State Sanitarium for Tuberculosis, ... 230

Effect of Pain and Shock on Operative Mortality, ... 27

Editorial News Items, ... 29

Educating the Public via the Drama, ... 98

Editorial News Itema, ... 232

Health in the Canal Zone, 231

Infantile Mortality in India, 231

Local Anesthesia, ... 27
Mediastinitis..... 165
Pomposity, ... 376
Reasons for Positive and Negative Reactions to Light of Small Eyeless Organisms, ... 375
Recurrence of Breast Cancer Through the Deep Fascia..... 167
Sixteenth Annual Session Tri-State Medical Association,..... 166
The Treatment of Pulmonary Tuberculosis..... 28
The High Incision in Abdominal Cæsarian Section, 166
Thyroid Eliminated from our Army and Navy..... 309
The Medical Profession and Eugenics,..... 97
"The Mother,"..... 97
The North Carolina State Board of Medical Examiners..... 375
Tentative Program Sixty-First Annual Meeting Medical Society State of North Carolina, ... 376
Transactions Tri-State Medical Association of the Carolinas and Virginia,.. 99
"The Physician a Benefactor," 229
The Milk Supply of India, 230
Tuberculosis in India,..... 231
U. S. Public Health Service Pellagra Hospital Located at Spartanburg, S. C.,.... 309
Wood Alcohol,..... 231

Book Notices.

A Text-Book of the Practice of Medicine, by James M. Anders, M.D.,..... 36
A System of Surgery,..... 391
Anatomy and Dissector in Abstract, by Stewart L. McCurdy, A.M., M.D.,.. 106
A Treatise on Diseases of the Skin, by Henry W. Stelwagon, M.D.,..... ... 236
Anatomy and Physiology, by John Forsyth Little, M.D.,..... 104
A Synopsis of Medical Treatment, by George Cheever Shattuck, M.D.,..... 238
A Manual of Venereal Diseases, by Sir Alfred Keogh. 171
A History of Laryngology and Rhinology, by Jonathan Wright, M.D.,..... 313
Anatomy and Physiology for Nurses, by Amy E. Pope, 238
Clinical Hematology, by Gordon R. Ward, M.D.,. 391
Clinical Diagnosis and Urinalysis, by James R. Arneill, A.B., M.D., ... 104
Diseases of the Heart, by James MacKenzie, M.D., 311
Dorland's American Illustrated Medical Dictionary, by W. A. Newman Dorland, M.D.,..... 36
Diseases of the Kidneys and Nervous System, by A. S. Blackwood, B.S., M.D.,.. 35
Diseases and Deformities of the Foot, by John Joseph Nutt. M.D.,..... 105
Elements of Homeopathic Theory, etc., by Drs. F. A. Boericke and E. P. Anshutz..... 171
Fundamentals of Farming and Farm Life, by Edwin Jackson Kyle, B.S., ... 34
Genito-Urinary Surgery,... 391
Genito-Urinary Diseases and Syphilis, by Edgar G. Ballenger, M.D.,..... 34
General John Regan, by G. A. Birmingham, ... 106
History of Medicine, etc., by Fielding H. Garrison, M.D.,..... 36
How to Take Care of the Baby, by Dr. Francis Tweddell,,..... 37
Infant Feeding, by Clifford G. Grules, A.M., M.D.,.. 392
International Clinics, edited by Henry W. Cattell, A. M., M.D.,..... 34
Infection and Immunity, by Charles E. Simon, M.D., 238
International Clinics,..... 237
Irritability, by Max Verworn, M.D., ... 237
Leaders in Homeopathic Therapeutics, by E. B. Nash, M.D.,..... 171
Manual of Obstetrics, by John Osborn Polak, M.D., 236
Medical and Surgical Reports of the Boston City Hospital, ... 105
Materia Medica, Pharmacology, Therapeutics and Prescription Writing, by Walter A. Bastedo, M.D., 35
My Wife's Hidden Life,.... 314
Modern Surgery, by J. Chalmers DaCosta, M.D.,..... 390
Medical Gynecology, by S. Wyllis Bandler, M.D.,... 238
Old Age Deferred, by Arnold Lorand, M.D.,..... 391
Progressive Medicine, edited by Hobart Amory Hare, M.D.,..... 35
Psychanalysis, by A. A. Brill, Ph.D., M.D.,..... 390
Principles of Surgery, by W. A. Bryan, M.D.,..... 36
Practical Medicine Series, 105
Progressive Medicine,.... 237
Practical Sanitation, by Fletcher Gardner, M.D., 312
Prevention and Control of Disease, by Francis Ramaley, Ph.D.,..... 313
Pathogenesis of Salvarsan Fatalities by Sanitats-Rat, by Dr. Wilhelm Wechselmann,..... 237
Recent Studies of Tuberculosis, A Reprint of Articles Published in the Interstate Medical Journal, 392
Radium Therapeutics, by N. S. Finzi, M.B.,..... 312
State Board Questions and Answers, by R. Max Goepp, M.C., ... 238
Specific Diagnosis and Specific Medication, by John William Fyfe, M.D.,..... 312
"Stammering and Cognate Defects of Speech," by C. S. Bluemel, ... 314
Studies in Cancer and Allied Subjects, by William H. Woglom, M.D..... 105
The Treatment of Rheumatic Infections,..... 37
What Heart Patients Should Know and Do, by Wm. Francis Honan, M.D..... 37
The White Linen Nurse... 37
Transactions of the Thirty-Fifth Annual Meeting of the American Laryngological Association,..... 105
Transactions of the Nineteenth Annual Meeting of the American Laryngological, Rhinological and Otological Society,..... 105
The Door that has no Key, by Cosmot Hamilton,.... 105
The Surgical Clinics of John B. Murphy, M.D.,..... 35
The Intervertebral Foramen, by Harold Swanberg, 106
Transactions of the American Gastro-Enterological Association,..... 104
Text-Book of Physiology, by William H. Howell, M.D., 35
The Practice of Peniatrics, by Charles Gilmore Kerley, M.D.,..... 239
The Full of the Moon, by Caroline Lockhart, ... 311
The Hypodermic Syringe, by George L. Servoss, M.D., 313
The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago,..... ... 313
The Fundamental Basis of Nutrition, by Graham Lusk,..... 314
Tuberculin Treatment, by Clive Riviere, M.D..... 170
The Clinics of John B. Murphy, M.D.,..... 399
Transactions of the American Pediatric Society,.... 391
When to Send for a Doctor and What to do Before the Doctor Comes, by Frieda E. Lippert, M,D.,..... 170

Abstracts.

A Clinical Study of 100 Cases of Pneumonia,..... 38
Ante-Mortem Thrombosis in Pneumonia, ... 249
Acute Intestinal Obstruction Due to Volvulus of the Cecum,..... 261
Arteriosclerosis, Late Paresis and Trauma,..... 395
Ante-Mortem Thrombosis in the Right Heart and Pulmonary Arteries as a Cause of Death in Lobar Pneumonia,..... 318
Arteriovenous Anastomosis for Impending Gangrene, 317
A Case of Coffee Poisoning, 322
Acute Epidemic Poliomyelitis,..... 327
An Inagglutinable Strain of B. Typhosus,..... 328

An Epidemic of Specific Parotitis in School Children, ... 173
A Case of Myxo-Sarcoma of the Lung Involving the Heart, ... 177
Absence of Corpus Callosum ... 182
A New Test for Arteriosclerosis, ... 183
A Case of Salvarsan Poisoning, ... 184
Amino-Acids and Sugars in Rectal Feeding, ... 185
A Streptothrix in Cases of Banti's Disease, ... 392
A New Treatment of Hyperacidity, ... 393
Bronzed Diabetes, ... 112
Case of Osteogenesis Imperfecta, ... 175
Cyclic Vomiting in Children, ... 258
Congenital Chondrodystrophy, ... 179
Case of an Unusually Large Tumor of the Child Complicating Delivery, ... 180
Contribution to the Subject of "Hysterical Situation" Psychoses, ... 396
Cystitis in the Female, ... 261
Confirmed High Blood Pressure, ... 44
Case of Ovarian Pregnancy with Full Time Fetus, ... 245
Diseases Due to Deficiency in Diet, ... 321
Diagnosis and Treatment of Gun-Shot Wounds of the Spleen, ... 324
Discussion on Urinary Antiseptics, ... 173
Dermatitis Due to Plaster of Paris, ... 183
Duodenal Ulcer, ... 258
Drug Treatment of Enuresis 246
Emetine and the Specific Serum in Dysentery, ... 322
Errors in the Diagnosis and Treatment of Diseases of the Joints, ... 259
Facial Paralysis Following Neosalvarsan Injection, ... 183
Fatal Hemorrhage from the Throat, ... 248
Fracture of the Femoral Neck in Children, ... 249
Features of Renal Tuberculosis, ... 246
Fatal Cases of Eczema in Children ... 250
Glucose Injections as Stimulant and Tonic, ... 394
Glycogen Content of Mucous Membrane of Fallopian Tube, ... 244
Hereditary Congenital Torticollis, ... 250
Hot Baths in Infantile Pneumonia, ... 393
Hour-Glass Stomach, ... 396
Hemiplegia Following Syphilis, ... 115
Hyperthermic Treatment of Gonorrhea, ... 245
Hyoscine-morphine and Pituitrin in Parturition, ... 245
Intermittent Claudication in Right Lower Extremity, 112
Influenzal Meningitis, ... 174
Is Any Illness in Infants Due to Feeding, ... 43
Innervation of the Eye Muscles, ... 321
Incontinence of Urine in Children, ... 255
Infection by B. Coli in the Puerperium, ... 326
Improved Method of Operation in Dupuytren's Contraction of the Fingers, ... 320
Idiopathic Epilepsy in Children, ... 44
Infantile Type of Uterus with Dysmenorrhea, ... 247
Local Treatment of Vincent's Angina with Salvarsan, ... 326
Murder by Drowning, ... 263
Medication Through a Tracheal Fistula, ... 182
Mistakes in Diagnosis of Juxta-Pyloric and Duodenal Ulcer, ... 181
New Method of Treating Chronic Colicystitis and Other Bacterial Infections 260
New Treatment for Ringworm, ... 254
Operations for Harelip in the Out-Patient Department, ... 316
Operation in Cases of Aneurysm and Injuries of Blood Vessels, ... 320
Operation for Perforative Typhoid Ulcer, ... 42
Ovulation, Corpus Luteum and Menstruation, ... 179
Oxycephy, ... 188
Operative Treatment of Fractures, ... 252
Observations on the Surgery of the Spleen, ... 241
On the Importance of Marine Hospitals in the Treatment of Surgical Tuberculosis, ... 110
Progressive Epileptic Myoloncus, ... 108
Pathology of the Adrenals, 181
Pellagra-Like Skin Lesions in Australia, ... 244
Prognosis and Treatment of Tetanus, ... 245
Petrol as a Therapeutic Agent, ... 255
Parasyphilis, ... 262
Portals of Tuberculous Infection in Children in the First Year of Life, ... 188
Paralysis Agitans and the Ductless Glands, ... 184
Pituitary Extract in Obstetrical Practice, ... 318
Pathology and Therapy of Renal Calculus, ... 181
Pituitary Substance in Asthma, ... 393
Petrolatum as a Substitute for Beck's Paste in Treating Fistula, ... 254
Postoperative Treatment of Anal Fistula, ... 115
Pulmonary Tuberculosis, ... 255
Pneumonia, ... 256
Quincke's Disease, ... 248
Recurrent Intussusception: The Report of a Case which was Operated Upon Three Times, ... 323
Roentgen Rays in Skin Diseases, ... 180
Roentgen Therapy of Tuberculous Lymphatic Glands ... 258
Ringworm Treated by X-Rays, ... 187
Radium in the Treatment of Malignant Disease, ... 39
Radical Cure of Procidentia Uteri, ... 253
Surgical Treatment of Ascites, ... 325
Summer Diarrhea of Children, ... 250
Spasmodic Heredo-Syphilitic Paraplegia in Children, ... 251
Subcutaneous Injections of Emetine in Phthisis, ... 394
Septic Puerperal Infection and Its Treatment, ... 394
Spinal Anesthesia by Tropecocaine, ... 39
Syphilis of the Heart, ... 249
Small Enemata, ... 246
Scarlatinal Measles, ... 254
The Isolation of Cocci from the Urine, ... 318
Treatment of Diabetes Mellitus, ... 319
Tetany, ... 320
Treatment of Syphilis with a New Arsenical Preparation Galyl (1116), ... 323
The Modern Treatment of Heart Disease in Children, 325
Treatment of Gastric Ulcer, 327
Treatment of Supplementary and Vicarious Menstruation, ... 327
Treatment of Bedsores, ... 251
Treatment of Night Terrors, 251
The Use of Pituitary Extract in Obstetrics, ... 172
Thrombosis, ... 172
Treatment of Burns by the Application of Alcohol, ... 174
Treatment of Furunculosis, 175
The Diagnosis of Extra-Uterine Pregnancy, ... 175
The Pancreatic Secretion, 178
The Umbilical Lung, ... 244
The Experimental Production of Pernicious Anæmia in Rabbits, ... 180
Treatment of Acute Abdominal Cases in Children, 181
The Treatment of Neuritis with Strychnine, ... 182
The Treatment of Acute Pleuritic Empyema, ... 183
The Combined Action of Medicaments in Cardiac and Renal Dropsy, ... 183
Thiosinamin in Keloid and Dupuytren's Contraction, 184
The Treatment of Umbilical Hernia in Children by the Subcutaneous Elastic Ligature, ... 186
The Ductless Glands and the Nervous System, ... 186
Treatment of Progressive Paralysis, ... 393
The Caviblen Treatment of Gonorrhea, ... 393
Treatment of Myalgia, ... 394
The Wassermann Reaction

in Children,..... 396
Theory of Pathogenesis of Dermoid Cysts of the Ovary,..... 896
Treatmenf of Tuboovarian Varicocele by Intraligamentous Venous Ligation, 397
Treponema in the Brain of General Paralytics..... 38
The Organic Theory of Chorea,..... 259
The Mauner of Mercury's Action,..... 260
Torn Semilunar Cartilages, 263
The Treatment of Corns and Warts by Ionization,..... 316
The Administratioe of Neosalvarsan,..... 255
The Treatment of Dysentery, ... 256
The Use and Abuse of Tuberculin, ... 185
Spasmophile Convulsions 249
The Etiology of Syphilitic Hemiplegia,..... 240
The Use of Radium in Malignant Disease,..... 241
The Diagnosis and Treatment of Granular Kidney 243
Transplantation of the Ovary in the Human Being with a Record of Three Cases..... 245
The Treatment of Pleurisy in Children,.. 247
Treatment of Hematogenous Infections of the Urinary Tract,..... 248
The Diphtheria Bacillus and Scarlatinal Infection,.... 111
The Intestine as a Pathway of Tuberculous Infection, 111
Two Years' Experience with Salvarsan,..... 113
The Treatment of Ankylostomiasis,..... 114
Treatment of Epistaxis,.... 115
The Internal Secretions and The Female Characteristics,..... 116
reatment of Acute Phlebitis, ... 116
The Micro-Organism Causing Epidemic Poliomyelitis,..... 109
Treatment of Tenia by Thymol, ... 40
Treatment of Hematemesis, 41
The Technic of Suprapubic Prostatectomy, ... 41
The Use of Short Incisions in Radical Operations for Inguinal Hernia,..... 41
Treatment of Flatulence,... 42
The Invention of Spectacles, 43
The Treatment of Umbilical Hernia in Infants,..... 44
Treatment of Intestinal Toxemia,..... 107
The Wassermann Reaction and Mental Disease,..... 108
Uterine Hemorrhage,..... 328
Use of Aromatic Arsenic Preparations by Rectum in Infants,..... 259
Veronal Poisoning,..... 172
Vaccines in the Treatment of Chronic Bronchitis and of Asthma,.. 40
What the General Practitioner Should Know About Gonorrheal Iritis,..... 242

Relation of the Rate of Absorption of Epinephrin to its Glycosuric and Diuretic Effects.

Subcutaneous injections of epinephrin are, in contrast with its behavior in the production of its other effects, more favorable to the production of glycosuria (in rabbits) than intramuscular injections; the failures are fewer and the quantities of dextrose in the urine usually large. In general, as regards the stimulation of diuresis by epinephrin, a subcutaneous injection exerts usually a greater effect than an intramuscular one. Subcutaneous injections of a certain dose of epinephrin distributed over several areas are far less effective than the administration of that dose in a single injection. They fail frequently to produce any glycosuria; the quantity of dextrose in the urine, when present, is less, and the quantity of urine generally diminished. Thus apparently, the more slowly injected epinephrin reaches the blood, the greater is its effect in producing glycosuria, and generally, also, the greater its diuretic action. —Kleiner and Meltzer, in the Journal of Experimental Medicine.

Iodine in the Diet and its Role in Thyroid Disorders.

The iodine content of the thyroid gland can be modified through the diet as well as by medical administration of this element, for iodine is more widely distributed in food and beverages than is generally realized. The air also contains iodine,—especially in the vicinity of the ocean, though river water also contains it, that of the Seine, e.g., containing 5 mg. (1-12 grain) in every 10,000 kilos. (10 tons) of water. Many plants contain a noteworthy proportion of iodine, while, on the contrary, some do not contain any at all. The following articles may be considered iodine-free: Almonds, artichokes, bananas, young carrots, cocoa beans, chestnuts, Brussels sprouts, coffee beans, hazelnuts, endive salad, beans, lentils, peas, figs, strawberries, raspberries, melons, oranges, plums, pears, apples, grapes, wheat, rye, oats, barley, black radishes, and tomatoes. The following contain a great deal of iodine: Pineapples, beets, mushrooms, rice, garlic, and dandelion leaves. French wines, with the exception of champagne, all contain iodine.

Among the foods of animal origin, those obtained from the sea, especially shrimps, lobsters, and mussels, naturally contain the largest proportion of iodine. The meat of herbivorous animals contains a relatively large quantity of it, though calf, horse meat, and beef contain but little. Pork possesses a high iodine content. The flesh of game, including both mammals and birds, also contains a notable amount of iodine. Eggs can in general be put down as iodine free, while milk belongs to the group of foods with an intermediate iodine content.

From data such as the preceding the physician will be able readily to decide what articles of diet and beverages he may order in exophthalmic goiter, simple goiter, myxema, and obesity.—A. von Bokay, in the Zeitschrift fur Balneologie.

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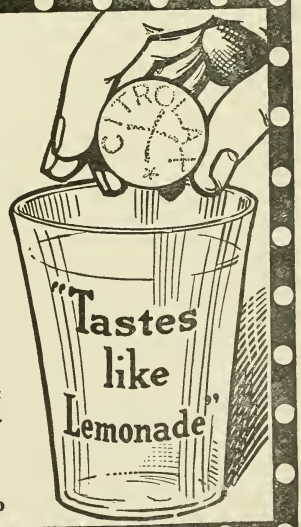

The Cardiac Sign in Carcinoma.

The cardiac sign in carcinoma is a remarkable diminution of the area of cardiac dullness in the recumbent posture as determined by digital percussion. The dullness begins above about the fourth or fifth costal cartiloge, has its right edge about ½ or 1 inch to the left of the midsternal line, and measures across less than 2 inches at the level of the fifth costal cartilage. Often it measures less than 1 inch across, and sometimes there is no cardiac dullness at all. Often the dullness, though narrow in the recumbent posture, is normally or even abnormally broad in the erect.

Certain limitations exist to the significance of the sign. Thus when any cause is present tending, like ordinary emphysema, to reduce the area of cardiac dullness, then a very small dullness naturally conveys no special meaning. On the other hand, when there is a well-known cause of enlargement of heart dullness, such as albuminuria, valvular heart disease, pericarditis, or retraction of lung from phthisis or past pleurisy, then the absence of the sign is equally without significance. Moreover, where the heart is displaced considerably upward the absence of the sign is unreliable. Yet allowing for these limitations, a large number of cases remain in which its help is of value.

Of a total of 111 cancerous cases 97 (87 per cent.) gave the sign, whereas of a total of 107 non-cancerous cases only 18 (16 per cent.) gave it. In 50 cases definitely doubtful as to cancer examined, the cardiac sign proved wrong only in 6 per cent.

It has been suggested that the sign is no more than a corroboration of marked wasting. This is not true, for in non-cancerous wasting, even when extreme, the sign is rarely found; in carcinomatous wasting, even when marked, it is sometimes absent; in cancerous cases which have not wasted at all it is sometimes present, and the diminution of the dullness in cancer cases is not proportional to the wasting.

When the sign is present in a case of possible carcinoma, the diagnosis of carcinoma should be rejected only after careful consideration. In what must be, if carcinoma at all, a late case of it, the absence of the test strengthens considerably the hope of the absence of carcinoma. Cases are accumulating in which the sign appeared early enough to enable a successful resection to be carried out.—Gordon, in The Bristol Medico-Chirurgical Journal.

Treatment of Chronic Arthritis.

Injections of phenol-camphor in chronic arthritis must be made only into the joint, never directly into the blood stream or the spongy portion of the bone. The formula the author now uses is 30 parts of phenol, 10 parts of camphor, and 30 parts of alcohol, and he injects only 0.5 or 0.25 c.c. at one point; 2 c.c. are necessary, however, for streptococcus processes. By using small doses and refraining from applying the method to the smaller joints, there need be no fear of toxic effects from the phenol-camphor.—Pohl, Zentralblatt fur Chirurgie.

Treatment of Dysmenorrhea.

Atropine is found very useful to overcome a tendency to painful menstruation. It probably exerts a relaxing influence when the autonomic nervous system is in a state of hypertonicity. The pronounced spasticity from vagal overstimulation causes pain at menstruation, and atropine wards this off or cures it. In a certain proportion of the cases in which the drug seemed ineffectual, all had one feature in common, viz., an unusually high blood pressure. The author now tests the blood pressure as a routine measure before giving the atropine; if it is within normal range, one can count confidently on the desired response to atropine. If it is abnormally high, there is no use in giving atropine; treatment must be directed to reducing the blood pressure, and the cause sought and removed. This cause is frequently found in the pelvis—a tumor or inflammation in one of the genital organs, or chronic constipation causing local disturbance in circulation. When the cause is removed the blood pressure becomes normal and the dysmenorrhea either ceases or then becomes amenable to atropine.—Stolper, Wiener klinische Wochenschrift.

Carbon-dioxide Snow in Treatment of Skin Diseases.

In two years' experience the writer has treated with carbon-dioxide snow 179 cases, of which 84 were of lupus erythematosus, seven rosacea, 55 various kinds of nevi, 14 verrucæ, eight carcinomata, and 100 various other skin lesions.

Of the 84 cases of lupus erythematosus, 10 were cured outright, 21 almost cured, 10 result unknown, and all the other cases markedly improved. Twelve seconds under fairly firm pressure was the average time of application, though places like the concha auris and the lips were subjected to less. Results with the papular types of rosacea on nose and chin were excellent. The author is careful to warn against anything but minimal pressure—average time six to seven seconds, and maximum ten seconds—and agrees with Morris and Low on the utility of the procedure. The 55 nevi

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showed variable results, especially the flat vascular types. On the whole, he is inclined to think that nevi do not yield to carbon-dioxide snow so well as to other methods of treatment. He prefers light or radium treatment for the common port-wine stains, and the galvanocautery for the stellate type. Cavernous angioma, on the other hand, yielded excellent cosmetic results (six cases) in fifteen to twenty sittings. The verrucose types are favorably influ-

enced. Common warts are an absolute indication for carbon dioxide, but those of the juvenile type are often too numerous. Such are best treated with a single x-ray application.

In the treatment of small epitheliomata the author has seen no reason for giving up either radium or x-rays, and in none of his eight cases did he use carbon dioxide exclusively. In certain precancerous conditions, such as hyperkeratotic infiltrations or pedunculated verrucose tumors, the snow was used with complete success, and senile warts yielded at once to single applications.

In lupus vulgaris the results are not at all encouraging, and it is only in the hypertrophic verrucose types that the author recommends it. A similar lack of permanent results was noted in psoriasis.—Haslund, Archiv fur Dermatologie und Syphilis.

Urinary Antiseptics.

Hexamethylenetetramine is by far the most efficient of all the urinary antiseptics, but liberates for maldehyde only in acid urine. Helmitol, citramine, hetraline, and cystopurin behave precisely like urotropin.

The acidity of the urine is readily increased to more than double the normal by acid sodium phosphate in the average dosage of gr. xv t.i.d., and to a less extent by benzoates. With large doses of citrates it is easily rendered alkaline, e.g., with sodium citrate, gr. xxx t.i.d.

Sandalwood oil, though not an efficient general urinary antiseptic, seems to have a specific action on the staphylococcus, which possibly accounts for its reputed favorable action in gonorrhea.

Benzoic and salicylic acids are fairly efficient urinary antiseptics, but of little use in alkaline urine.

Boric acid acts efficiently, its action being unaffected by alkalinity. It is the most efficient drug in alkaline urine available.

Uva ursi is a good antiseptic. Its action is certainly not due chiefly to the arbutin it contains.—Anson Jordan, British Medical Journal.

Toleration of Arsenic by the Human System.

Harding conducted a series of experiments to ascertain the toleration of arsenic by the human system. He commenced with 1-30 grn. doses three times a day immediately after food, and continued for four days without any results beneficial or otherwise. Analysis of an aliquot part of the urine passed, the daily dose of arsenic being 1-20 grn., yielded 1-50 grn. per diem, thus showing 3-100 grn. per diem otherwise disposed of. Doses of 1-15 grn. were taken on an empty stomach three times daily. The result was that the system became irritated and a distinct feeling of discomfort was experienced, lasting over two hours; 75 per cent. of this amount appeared in the urine; 1-5 grn. was then taken at a single administration. This also produced irritability and uncomfortable abdominal pains of a more or less severe character. Recourse was now had to the old dosage of 1-15 grn., and after the system became quite normal again the dose was increased to 1-12 grn., then to 1-10 grn., 1-8 grn. and to 1-5 grn. By thus going gradually to 1-5 grn. it was found that the amount was quite well tolerated without any discomfort or marked changes, and moreover, the average percentage of the drug appearing in the urine was maintained. At this stage, but not before, the urine began to depart from normal. Proceeding still onward the doses were increased to 2-3 grn., 3-4 grn., 5-6 grn., 1 grn. At this point it was felt that the limit was being approached. The next and highest dose reached was 1 1-5 grn. which produced irritability and distinct and lasting discomfort every way it was taken, and all precautions notwithstanding. The drug was now discontinued, but fullness after meals and general derangement were felt for several days. Harding then kept on with the drug, decreasing the amount daily. In one week 1-5 grn. was reached and in less than another week arsenic was dispensed with altogether without any of the symptoms mentioned above.—The London Lancet.

A Few Examination Questions Asked by the Board of Medical Examiners of Texas.

ANATOMY.

1. Give the course and distribution of the trifacial nerve.

2. Name and give the origin of the arteries supplying the stomach, small intestines, large intestines.

3. Give the course and branches of distribution of the femoral artery.

4. Name the ligaments of the knee-joint.

5. Name the structures forming the larynx.

6. Give the formation of the brachial and lumbar plexuses and name main branches given off from each.

7. Enumerate the bones forming the orbit.

8. Give origin, insertion, nerve supply, and action of the pronator radii teres muscle.

9. Describe the diaphragm, its principal openings and nerve supply.

10. Give the characteristic points of cer

vical, dorsal, and lumbar vertebræ.

PHYSIOLOGY.

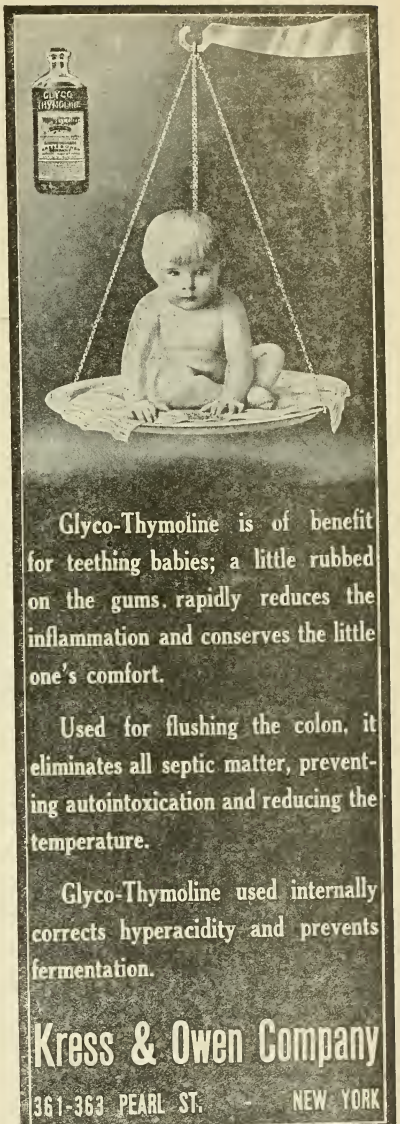
1. Give average normal temperature, rate of pulse and of respiration in (a) the infant, (b) the adult, (c) the aged.
2. Define protoplasm, and give the characteristic properties of living protoplasm.
3. Describe the heart sounds, and state to what they are due.
4. What digestive changes take place under the influence of saliva and of gastric juice.
5. State the origin and function of bile; give quantity secreted in twenty-four hours.
6. Describe the process by which digested food is absorbed.
7. Describe the physical properties of the blood, and name its constituents.
8. State origin of urea in the body; give average amount excreted in twenty-four hours.
9. Give function of (a) medulla oblongata, (b) the cerebellum.
10. Describe in detail how the placenta performs its function.

CHEMISTRY.

1. Complete the following equation: $NaCl + H_2SO_4 =$ ——— and name resultant compounds.
2. Differentiate ethyl alcohol from methyl alcohol, giving formula of each.
3. Name three extensively used carbon compounds which under certain conditions are dangerous to life.
4. State source of cyanogen gas and name two most important compounds.
5. Give a reliable test for nitrites.
6. (a) From what is the alkaloid muscarin derived; (b) give symptoms of poisoning; (c) fatal dose; and (d) physiological antidote.
7. How would you test water suspected of sewage contamination?
8. Describe a reliable method of determining the quantity of urea in a specimen of urine.
9. Describe a test for (a) albumin, (b) sugar, (c) pus, (d) blood, (e) indican, and (f) chyle.
10. Name chemical antidote for nitrate of silver or lunar caustic, and say how it acts.

PHYSICAL DIAGNOSIS.

1. State physical signs of pyloric stenosis.
2. Differentiate lobar from bronchopneumonia.
3. Give the physical signs of Raynaud's disease and describe the different grades.
4. State the principal diagnostic symptoms of scarlatina, diphtheria, variola, rubeola.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5. What is Cheyne-Stokes' respiration, Argyll-Robertson's pupil, Widal's test, Wassermann's reaction, Koplik's spots?

6. State briefly the principal diagnostic points of tetanus, exophthalmic goiter, chorea.

7. What are the plantar reflexes? What is the diagnostic value of the plantar reflexes?

8. In aortic and mitral insufficiency, where is the murmur heard most distinctly, and what is its direction of transmission?

9. Give differential diagnosis in ascites and cystic ovary.

10. Give differential diagnosis in cerebrospinal meningitis and acute anterior poliomyelitis.

PATHOLOGY.

1. Name some of the tissue changes incidental to old age.

2. Give the pathology of acute lobar pneumonia.

3. Name some of the most essential lesions found in acquired syphilis; first, second, and third stages.

4. Name the chief findings in enteric fever.

5. Give the pathology of chronic interstitial pneumonia.

6. Give the pathology of hemorrhoids.

7. Give the morbid changes resulting from disease of the pituitary body.

8. What morbid condition is brought about from disease of the adrenals?

9. Name some of the pathological changes resulting from cerebral hemorrhage.

10. What is an opsonin?

11. What do you understand by productive inflammation?

12. What is the pathology of diabetes mellitus?

OBSTETRICS.

1. Describe the changes that take place from the time the ovum is impregnated to the beginning of the second month.

2. Give the cause and mechanism of labor.

3. How would you manage a shoulder presentation?

4. Define ectopic gestation. Differentiate same from uterine pregnancy.

5. Give etiology and management of eclampsia.

6. (a) Define uterine inertia. (b) What do you understand by primary and secondary inertia? Describe them.

7. Give management of third stage of labor.

8. How would you do a podalic version?

9. Give management of puerperal stage.

10. Give etiology of hyperemesis and management of same.

GYNECOLOGY.

1. Give the (a) clinical diagnosis, (b) microscopic diagnosis of carcinoma of the cervix uteri.

2. Differentiate between tubal pregnancy and ovarian cyst.

3. Name and describe the ligaments of the uterus and briefly outline an adequate operation for the correction of retroversion of the uterus.

4. What pathological conditions demand an hysterectomy?

5. Give a clinical description of a case of chronic pyosalpinx and outline an adequate surgical operation for relief of same.

6. Define amenorrhea, dysmenorrhea, menorrhagia, metrorrhagia, and vicarious menstruation.

7. Describe clinically and pathologically three types of endometritis.

8. Describe the ovary (a) as to its anatomical relationships; (b) as to its physiological function.

9. A woman, aged 35, has an intermenstrual flow or discharge streaked with blood; mention four probable causes of same and make differential diagnosis with reference to malignant disease.

10. Give the etiology, pathology, and clinical diagnosis of chronic cystitis of woman.

Officer, in the Australasian Medical Gazette, reports his use of pituitrin. The doctor reaches the following conclusions: (1) Do not leave the patient after having given pituitrin; (2) pituitrin increases the force of the pains and lessens the interval between pains; (3) under chloroform the pains after administration of pituitrin do not altogether cease; (4) he has not had a case of retention of urine after pituitrin has been given; (5) the after-pains are not so severe; (6) the pains, though stronger, do not appear to be so acute; (7) the patients bear their pains much better; (8) the loss of blood immediately after labor is completed is not so great.

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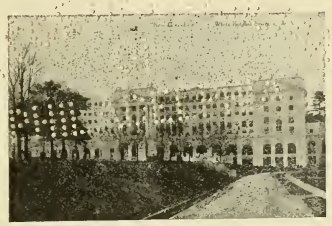

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Lobar Pneumonia.

Definition:—Lobar pneumonia is an acute infectious disease of the lungs, involving completely one or more lobes (hence the name "lobar"). It should not be confused with bronchopneumonia*, which is usually a mixed infection of the air-passages, extending to the small air cells, but not limited to a definite section of the lung. Lobar pneumonia is also known among physicians as croupous pneumonia, fibrinous pneumonia, lung fever, pneumonic fever, and pneumonitis.

Cause:—The disease is due, in practically all cases, to a microorganism known as the pneumococcus of Fraenkel. It was discovered by both Sternberg† and Pasteur in 1880, but it was only in 1894 that Fraenkel proved it to be the cause of lobar pneumonia. A very few cases of lobar pneumonia have been reported due to the pneumobacillus of Friedlander, the streptococcus and the influenza bacillus. The symptoms in these cases, however, differ from those of typical lobar pneumonia.

Source of Contagion:—It is an interesting fact that 80 to 90 per cent. of all persons harbor the pneumococcus in their mouths. The factors necessary to enable this organism to cause an attack of pneumonia are not definitely known. It is usual to associate exposure of any kind, especially to cold and wet, with the occurrence of pneumonia. This may act as a depressing factor, lowering the resistance and enabling any pneumococci which reach the small air cells of the lungs to multiply and attack the tissues. Contagion from a person harboring pneumococci of special virulence doubtless explains a number of cases. By "virulence" is meant the ability to grow in the body and produce disease. Such virulent pneumococci may be readily communicated from one person to another. It is well known that pneumonia frequently occurs in endemic form, that is, a number of cases appear within a short period in persons closely associated, and even epidemics of pneumonia occur, just as "contagious colds" travel around.

Pathology:—When the pneumococcus reaches the small air sacs of the lungs and conditions are suitable for its growth, symptoms of disease soon appear, such as fever, severe pains aggravated by coughing or strong inspiration, quick hard pulse, difficult breathing. Locally there is first a congestion and edema (swelling from accumulation of serous fluids), and the lung rapidly becomes heavy and solid and red from blood and fibrinous exudate. After a time, the diseased portion of the lung changes to a gray color, due to the accumulation of phagocytes and the breaking up of the fibrin preparatory to its removal and the restoration of the lung to its original condition. In the early stages of the disease the pneumococcus is nearly always present in the blood.

Coutrary to the usual belief, death rarely occurs from the consolidation of the lung and interference with respiration. It is due to the action of toxins liberated by the breaking up or dissolving of the pneumococci. The well known crisis of the disease is believed to result from the destruction of the pneumococci in the lungs and the neutralization of the toxins circulating in the blood. It is not dependent upon the clearing up of the lung or "resolution."

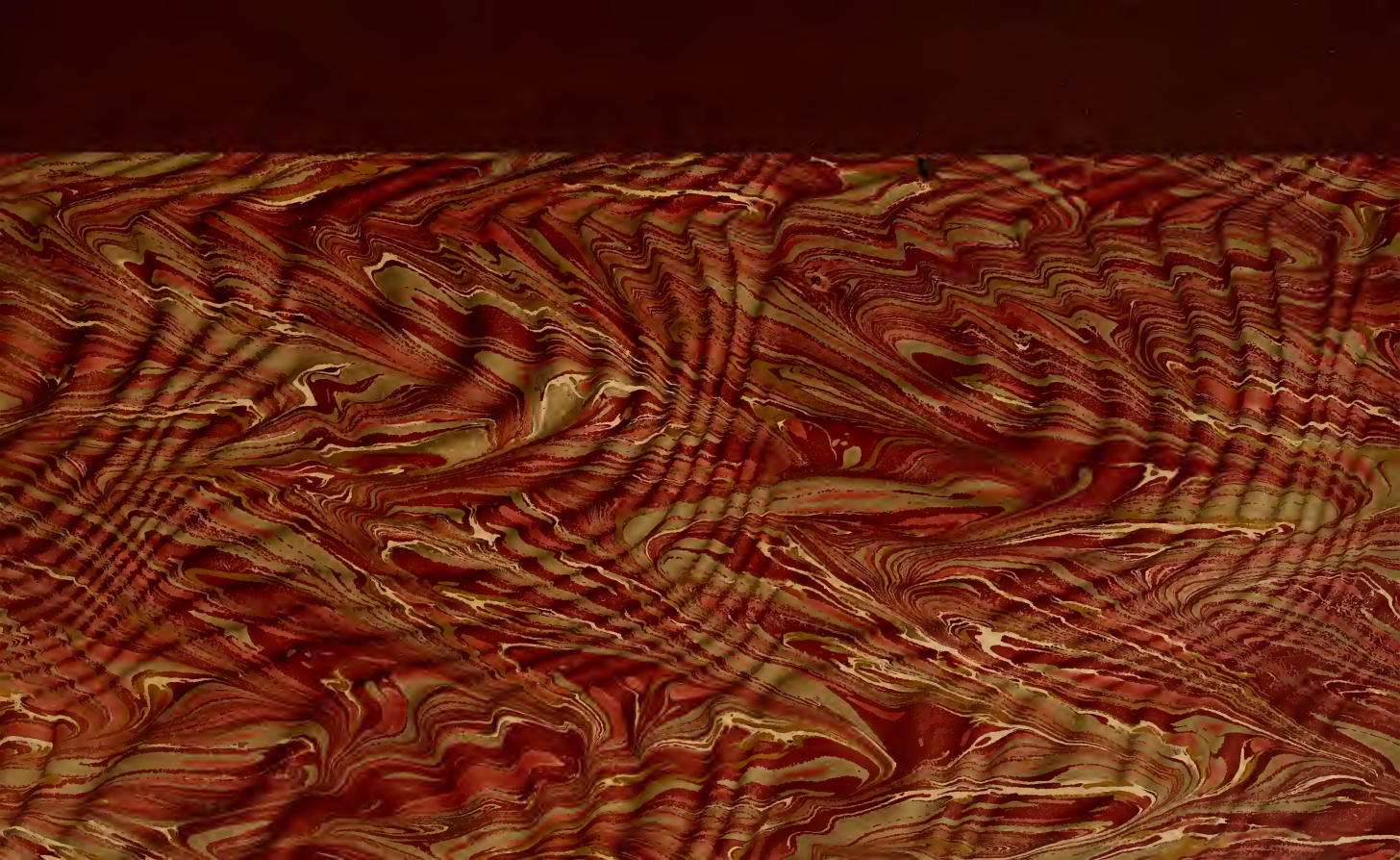
Occurrence and Prevalence:—Children up to the sixth year are very susceptible to pneumonia; after the fifteenth year susceptibility increases with each decade. It is very likely to attack individuals debilitated with sickness, lack of food, alcoholism, and those with constitutional defects. There is always danger of pneumonia occurring in persons suffering from other diseases, such as diphtheria, typhoid fever, influenza, pertussis, etc., and in such cases it frequently influences a fatal outcome.

The mortality in pneumonia ranges from 20 per cent. to 40 per cent. It is one of the most widespread and fatal of all acute infectious diseases.

TREATMENT.

Serum Treatment:—The scientific basis underlying the use of anti-pneumococcic serum is easily understood. There can be no doubt but that recovery from pneumonia is brought about by antibodies destructive to the pneumococci and capable of neutralizing their toxins. These antibodies are formed more or less slowly by the body cells and the injection of antipneumococcic serum* which affords additional antibodies from without, is a valuable therapeutic measure, especially when resorted to early

*Bronchopneumonia will be the subject of a later paper.

†George M. Sternberg, M.D., LL.D., formerly Surgeon-General of the U. S. Army—a famous American bacteriologist.

*In bronchopneumonia the streptococcus plays an important part and antistreptococcus serum is indicated in conjunction with antipneumococcic serum. When the infection is of a catarrhal type descending from the upper respiratory passages, Influenza Bacterin Mixed Mulford should be employed.